

Research Article

# A nexus of miR-1271, PAX4 and ALK/Ryk influences the cytoskeletal architectures in Alzheimer's Disease and Type 2 Diabetes

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Alzheimer's Disease (AD) and Type 2 Diabetes (T2D) share a common hallmark of insulin resistance. Reportedly, two non-canonical Receptor Tyrosine Kinases (RTKs), ALK and Ryk, both targets of the same micro RNA miR-1271, exhibit significant and consistent functional down-regulation in *post-mortem* AD and T2D tissues. Incidentally, both have Grb2 as a common downstream adapter and NOX4 as a common ROS producing factor. Here we show that Grb2 and NOX4 play critical roles in reducing the severity of both the diseases. The study demonstrates that the abundance of Grb2 in degenerative conditions, in conjunction with NOX4, reverse cytoskeletal degradation by counterbalancing the network of small GTPases. PAX4, a transcription factor for both Grb2 and NOX4, emerges as the key link between the common pathways of AD and T2D. Down-regulation of both ALK and Ryk through miR-1271, elevates the PAX4 level by reducing its suppressor ARX via Wnt/β-Catenin signaling. For the first time, this study brings together RTKs beyond Insulin Receptor (IR) family, transcription factor PAX4 and both AD and T2D pathologies on a common regulatory platform.

## Introduction

Epidemiological studies show that type 2 diabetes (T2D) increases the risk of Alzheimer's Disease (AD) by at least 2-fold, although there are only a few mechanistic models that provide a clear pathophysiological link [1]. PET and MRI studies show marked impairment of glucose and energy metabolism in both T2D and AD [2], amyloidogenesis being a salient feature in both. Reportedly, diabetic mice overexpressing islet amyloid polypeptide (IAPP) develop oligomers and fibrils with more severe diabetic traits, akin to AD mice models overexpressing amyloid precursor protein (APP) [3]. Additionally, traits like insulin resistance, altered amyloid metabolism, synaptic dysfunction, activation of the inflammatory response pathways and impairment of autophagy have been shown as common pathological features in both the diseases [4]. With the understanding that several pathological signals are being shared by AD and T2D, AD has been suggested to be a neuroendocrine disorder that resembles T2D [5].

Insulin receptor (IR), a typical receptor tyrosine kinase (RTK), further links both of them through resistance to insulin and other metabolic imbalances. Our recent study lists the differential activities of several human RTKs in *post-mortem* brain tissues of AD patients and liver tissues of T2D patients and categorizes them into functional and regulatory clusters [6]. In this context, we have further shown that two RTKs, Anaplastic Lymphoma Kinase (ALK) and Receptor-like Tyrosine Kinase (Ryk), functionally behave in a similar fashion in both the disease situations [6]. Both ALK and Ryk

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are involved in the regulation of Wnt/β-Catenin signaling [7–9], which behaves aberrantly in both AD and T2D [10]. In AD, Aβ increases GSK3β activity by inhibiting the canonical Wnt Signaling [11]. GSK3β is one of the kinases that hyperphosphorylate Tau protein, leading to the formation of neurofibrillary tangles of AD [12]. In turn, hyperphosphorylated Tau dissociates from microtubule and leads to the cytoskeleton instability [10–12]. In addition, both isoforms of GSK3 (GSK3α and GSK3β) play crucial roles in the insulin signaling of T2D [13]. Also, the non-canonical Wnt/planar cell polarity (PCP) signaling is correlated with the cytoskeleton stability through Wnt/RYK/Dvl/DAAM1/RhoA pathway [14].

Besides these pathways and signaling modalities, Reactive Oxygen Species (ROS) mediated oxidative stress has also been shown to be a common trigger in both the diseases [15]. A ROS producing NADPH oxidase, NOX4, is constitutively active with its regulatory protein tyrosine kinase substrate (Tsk4/5) with multiple SH3 domains [16] and interacts with Growth factor receptor-bound protein 2 (Grb2) naturally [17,18]. Phosphorylation of Nox4 Tyr-491 after IGF-I stimulation is responsible for Nox4 binding to the SH2 domain of Grb2 [18]. Reportedly in AD *post-mortem* brain, in AD cell models as well as in AD mouse model (APP/PS1 mouse), Grb2 transcript is significantly up-regulated [19]. In AD brain, the NOX4 expression is significantly increased with substantial correlation between its activity and age-dependent increases of Aβ and cognitive dysfunction [20,21]. In T2D, pancreatic β-cell dysfunction is promulgated by NOX4 over-activity and is sufficient to induce insulin resistance [22]. Growing number of evidence suggest that Nox4-derived ROS contributes to oxidative stress during the initial and chronic stages of T2D [23].

A third factor of commonality are the causative oligopeptides like Amylin and Aβ. The role of human Amylin was first observed as early in 1901, when it was described as hyaline deposits in the pancreatic islets of T2D patients [24]. Amylin is a Calcitonin family peptide and it tends to interact with GPCRs of class B [25] in non-disease conditions. However, the interaction pattern of misfolded or aggregated Amylin in disease conditions is still unclear. On the other hand, Aβ oligomers interact with the extracellular domain of Metabotropic glutamate receptors (mGluR5), which is another GPCR of class C [26]. More recently Amylin has emerged as a crucial component in AD pathogenesis. Both Amylin and Aβ interact with each other and lead to the formation of cross-seeded oligomers, where Amylin acts as the seed for Aβ aggregation [27–33].

It would be intuitive to think that the microRNAs, transcription factors (TF) and adapter proteins might stitch these factors together. Chanda et al. [34] had deduced several miRNAs from the bioinformatics analysis of the small RNA sequence data of AD like cell model, where AICD was transiently transfected and Aβ was treated externally in SHSY5Y cells. The analysis showed alteration of the expression of miR-1271 [34] among others, in the AD like situation. Reportedly, miR-1271 is up-regulated in palmitate induced insulin resistance in HepG2 cell lines [35]. In recent times the therapeutic potential of a cell-lineage specific TF, Paired Box Protein 4 (PAX4), is under scanner for T2D treatment [36]. A previous study showed elevated expression of PAX4 in islets derived from T2D donors owing to high circulating blood glucose [37]. PAX4 regulates the development of islets of Langerhans by increasing the β and δ-cells population [38]. Concomitantly, another TF, Aristaless Related Homeobox (ARX), up-regulates the α-cell population while reducing the β and δ-cells proliferation [39]. Furthermore, PAX4 and ARX are not only antagonistic functionally, they negatively regulate the transcriptions of their own genes [39,40]. PAX4 has also been shown to be involved in inducing regenerative capacity in insulin-positive islet cells in mice [36,41]. PAX4 mutation have been implicated in T2D [42] and its overexpression led to β-cell proliferation and apoptosis reduction [43]. Only very recently PAX4 has been implicated in denervation [44] and neurodegeneration, especially in Parkinson's disease models [45]. Reportedly, ARX mutation is associated with neurodegenerative and neurodevelopmental disorders through the impairment of the Wnt/β-Catenin signaling pathway [46–48]. Additionally, hippocampal and select cortical neurons in AD manifest phenotypic changes indicative of neurons re-entering cell division cycle [49,50]. Pathological signals trigger the Grb2/SOS/Ras cascade [51] that initiates cell cycle re-entry and proliferation but remains incomplete due to the lack of cell division machinery. Grb2 happens to be an important adapter of the insulin receptor and interestingly, insulin resistance is a noteworthy phenotype common to AD and T2D.

In the backdrop of AD and T2D, the present study, in one hand focuses on the regulation of both Grb2 and NOX4 by TFs like PAX4, and at the same time explores the roles of miRNA regulated non-canonical RTKs. We have investigated the consequences of pathological perturbations in both the diseases, starting from RTK signaling through their downstream effectors with an aim to link them with the culminating cellular event of cytoskeleton stability and its underpinning transcriptional regulation. Specifically, the study for the first time attempts to interpret the effects of contrasting and extraneous signals, akin to AD and T2D that utilize similar signaling gateways to achieve common outcome in two apparently diverse diseases.

## Materials and methods

### AD and T2D human tissues

AD (NB820-59363) and Non-AD (NB820-59177) post-mortem whole brain lysates and Type 2 Diabetic (NB820-59232) and Non-Diabetic (NB820-59291) post-mortem whole liver lysates were purchased from Novus Biologicals. For statistical reasons, we procured products from different patients with different lot numbers (for patients details see Supplementary Table S1a,b).

### Ethics statement

All animal experimentations using AD and T2D mouse models were conducted following the institutional guidelines for the use and care of animals and approved by the Institutional Animal and Ethics Committee of NBRC, Gurgaon (NBRC/IAEC/2012/71) and IICB, Kolkata (IICB/AEC/Meeting/2016/AUG), respectively.

### APP/PS1 mice

APP/PS1 or B6C3-Tg (APPswe, PSEN1dE9/) 85Dbo/J mice were obtained from the Jackson Laboratory (U.S.A.) and maintained in the Institutes animal house facility. These transgenic mouse line for AD express human APPswe mutations (K670N and M671L) and exon 9-deleted human presenilin 1(PSEN1dE9) under the control of the mouse prion gene promoter. Animals were provided water and food /ad libitum/. The genotyping was carried out using PCR as described previously [52]. AD mice along with controls at their age of 8 and 12 months were anaesthetised with Xylazine (10 mg/kg body weight) and Ketamine (100 mg/kg body weight) and perfused transcardially with PBS followed by 4% paraformaldehyde (w/v) in PBS. Brains were collected and further placed in 4% paraformaldehyde for 24 h and then treated with 10, 20 and 30% sucrose (in PBS) followed by sectioning in freezing microtome (20 µm thickness). Sections (both control and AD) were placed on the same slides. These APP/PS1 mice were maintained in the animal house facility of NBRC, Gurgaon.

### C57BL/6 mice with obesogenic western diet (OWD)

Animal experiments were performed under the approved Institutional Animal Ethics Committee (Approved by CPCSEA, India) protocol. Wild-type male C57BL/6 mice (6–8 weeks old) were kept at ambient temperature ( $22 \pm 1^\circ\text{C}$ ) maintaining 12 : 12 h light-dark cycles and fed with standard chow diet (4.3% lipid and 70% carbohydrate) and/ or obesogenic western diet (45% kcal fat, MP Biomedical) for respective experiments. Weight and age-matched male C57BL/6 mice were fed with an obesogenic western diet for up to 24 weeks. These C57BL/6 mice were maintained in the animal house facility of IICB, Kolkata.

We have tested for gradual weight gain and hyperglycemia at each 4 weeks interval. All mice were fasted for 6 h and fasting blood glucose was measured using a calibrated glucometer by taking one drop of blood from the tail tip cut (Supplementary Figure S1).

### AD and T2D cell models, cell culture, transfection, plasmids, siRNAs and antibodies

Clones of both Amyloid-β Protein Precursor Intracellular Domain-GFP (AICD-GFP) construct or ‘AICD’ and Grb2-DsRed construct or ‘Grb2’ were available in the lab [53–57]. ALK (siRNA ID: s1269; no. 4392420), RYK (siRNA ID: s12390; no. 4390824) and PAX4 (Assay ID s10061, 4392420) siRNAs were purchased from Ambion, life technologies™. Amyloid β (Aβ)-peptide (A980), Sodium Palmitate (P9767) and Insulin (I9278-5ML) were purchased from Sigma-Aldrich. Amylin (ab142398) was purchased from Abcam. Antibodies were purchased from Abcam and CST (see Supplementary Table S2 for details).

Human neuroblastoma (SHSY-5Y) and liver carcinoma (HepG2) cell-lines were obtained from National Cell Science Centre, Pune, India and were cultured in respective media of DMEM-F12 (Gibco) and DMEM (Gibco) supplemented with 10% fetal bovine serum (Gibco) at  $37^\circ\text{C}$  in 5% CO<sub>2</sub> atmosphere under humidified condition. Transfection of cells were done using Lipofectamine 2000 (Invitrogen) and as described [19]. For co-transfection, constructs were taken in equal proportions. Human neuroblastoma (SHSY-5Y) were transiently transfected with AICD and were externally treated with 0.5 µM Aβ 1–42 (Sigma A980) for 3 h after transfection and samples were collected after 48 h of addition [58]. An amount of 0.75 mM aqueous Sodium Palmitate (Sigma P9767) along with 1% fatty acid free BSA (Sigma A8806-5G) was added to 24 h serum starved media of HepG2 cells. Aqueous Amylin (Abcam ab142398) was added to the media at a final concentration of 0.5 µM

after 3 h treatment of Palmitate. Samples were then collected after 16 h with or without insulin (Sigma I9278-5ML) (100 nM) shock of 10 min.

### Protein from mammalian cell

Phosphate buffer saline (PBS) washed pellet from cell lines were lysed on ice in lysis buffer (1 M Tris-HCl, pH 7.5, 1 N NaCl, 0.5 M EDTA, 1 M NaF, 1 M Na<sub>3</sub>VO<sub>4</sub>, 10% SDS, 20 mM PMSF, 10% Triton X-100, 50% glycerol) for 30 min in presence of complete protease inhibitor (Roche Diagnostics) and centrifuged at 13 000g for 15 min. Protein concentration was determined by Bradford protein estimation assay. Western blots and quantification were done as per described protocol [19]. Depending on the antibodies specificity and the cross reactivity, multiple antibodies were probed on a single blot.

### Fluorescence-activated cell sorting (FACS) and estimation of ROS activity

Palmitate/Amylin treated HepG2 cells were harvested and stained with CM-H<sub>2</sub>DCFDA (5-(and-6)-chloromethyl-2',7' dichlorodihydrofluoresceindiacetate, acetyl ester) according to manufacturer's protocol. The cells were then analyzed for ROS activity by FACS (BD FACS Calibur platform, U.S.A.).

### RNA isolation, c-DNA preparations and real time PCR

RNA was isolated from cells by TRIzol Reagent (Invitrogen, U.S.A.) extraction method following manufacturer's protocol which discussed in Majumder et al. 2017 [19]. Real time RT-PCR reaction was carried out using Syber green 2X Universal PCR Master Mix (Applied Biosystems, U.S.A.) in ABI Prism 7500 sequence detection system. The absolute quantification given by the software was in terms of CT values. The relative quantification of target genes was obtained by normalizing with internal control gene (GAPDH gene). Primer sequences and PCR conditions are mentioned in Supplementary Table S3.

### Chromatin immuno precipitation (ChIP)

We used High Sensitivity ChIP Kit (ab185913) to perform the ChIP assay and followed manufacturer's protocol. qRT-PCR analysis was done with the purified DNA using primers for *GRB2* and *NOX4* gene, more specifically around the *PAX4* binding sequence. Primer details are given in Supplementary Table S4.

### Validation of ALK and RYK double knockdown model

ALK and RYK double knockdown models were established in two cell lines, SHSY-5Y (human neuroblastoma cells) and HepG2 (human liver carcinoma cells). Here ALK and RYK two genes were simultaneously knocked down in cells by using siRNAs against both ALK and RYK compared with cells where two non-targeted (MOCK) siRNAs were simultaneously knocked down. The extent of knockdown was checked by measuring expression levels of both ALK and RYK by western blot in both SHSY-5Y and HepG2 cells.

### Statistical and bioinformatics analysis

Unpaired 't' test was carried out to compare the means of two experimental groups. The error bar represents standard error [(standard deviation/  $\sqrt{n}$ );  $n$  = sample size]. To arrive at the statistically significant sample size for each experiment we did power analysis using the *apriori* model [59] as incorporated in the G\*power 3.1 [60] software [19].

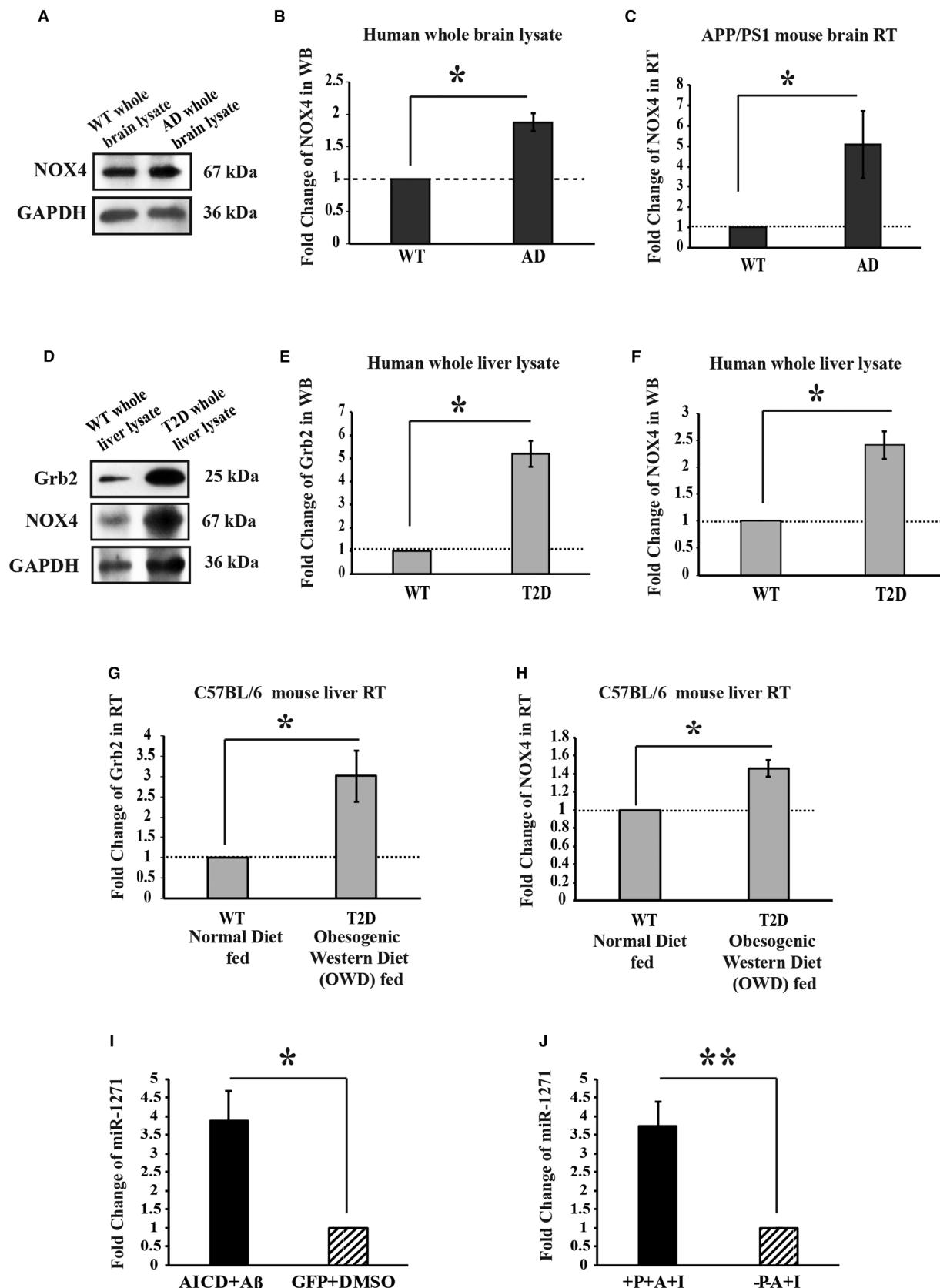
We used Transfac® MATCH1.0 (<http://www.gene-regulation.com/pub/programs.html#match>) online search tool to identify the TFs for the Grb2 and NOX4 gene. Additionally, miRDB [61] (<http://www.mirdb.org>) was used to analyze the targets of miR-1271.

Gene enhancers (genehancer) were identified using genehancer v4.8 database (downloaded from <https://genecards.weizmann.ac.il/geneloc/index.shtml>) [62].

## Results

### miRNA 1271 restricts the expressions of ALK/RYK that in turn elevate Grb2/NOX4 levels

We began with estimating the transcriptional and translational levels of Grb2 and NOX4 in both AD and T2D like situations. The expression level of NOX4 was elevated by 1.86 fold (Figure 1A,B; Supplementary Figure S2) in AD *post-mortem* brain as opposed to non-AD control. Grb2 and NOX4's expression levels were higher by



**Figure 1. Alteration of expression of Grb2 and NOX4 in clinical, in AD or T2D mimicking mouse.**

(A) Western blot showing the NOX4 and GAPDH levels in AD whole brain lysate. (B) Histogram representing the mean value of optical density of the

Part 1 of 2

**Figure 1. Alteration of expression of Grb2 and NOX4 in clinical, in AD or T2D mimicking mouse.**

Part 2 of 2

bands, normalized against GAPDH. NOX4 was overexpressed by 1.86 fold in AD Brains. (C) Shows NOX4 transcript level being up-regulated by 5.06 fold by qRT-PCR of APP/PS1 mouse brain tissue. (D) Western blot showing Grb2, NOX4 and GAPDH levels in T2D whole liver lysate. (E and F) Histograms representing the mean values of Grb2 and NOX4 normalized against GAPDH. Grb2 and NOX4 were overexpressed in T2D liver by 5.27 fold and 2.4 fold, respectively. (G and H) show qRT-PCR results in T2D mouse model where C57BL/6 mice are maintained in OWD, Grb2 and NOX4 transcript levels are overexpressed by 3.01 fold and 1.45 fold, respectively. (I and J) the transcript levels of miR-1271 in AD and T2D cell model, respectively. All the statistical information is compiled in Supplementary Table S7.

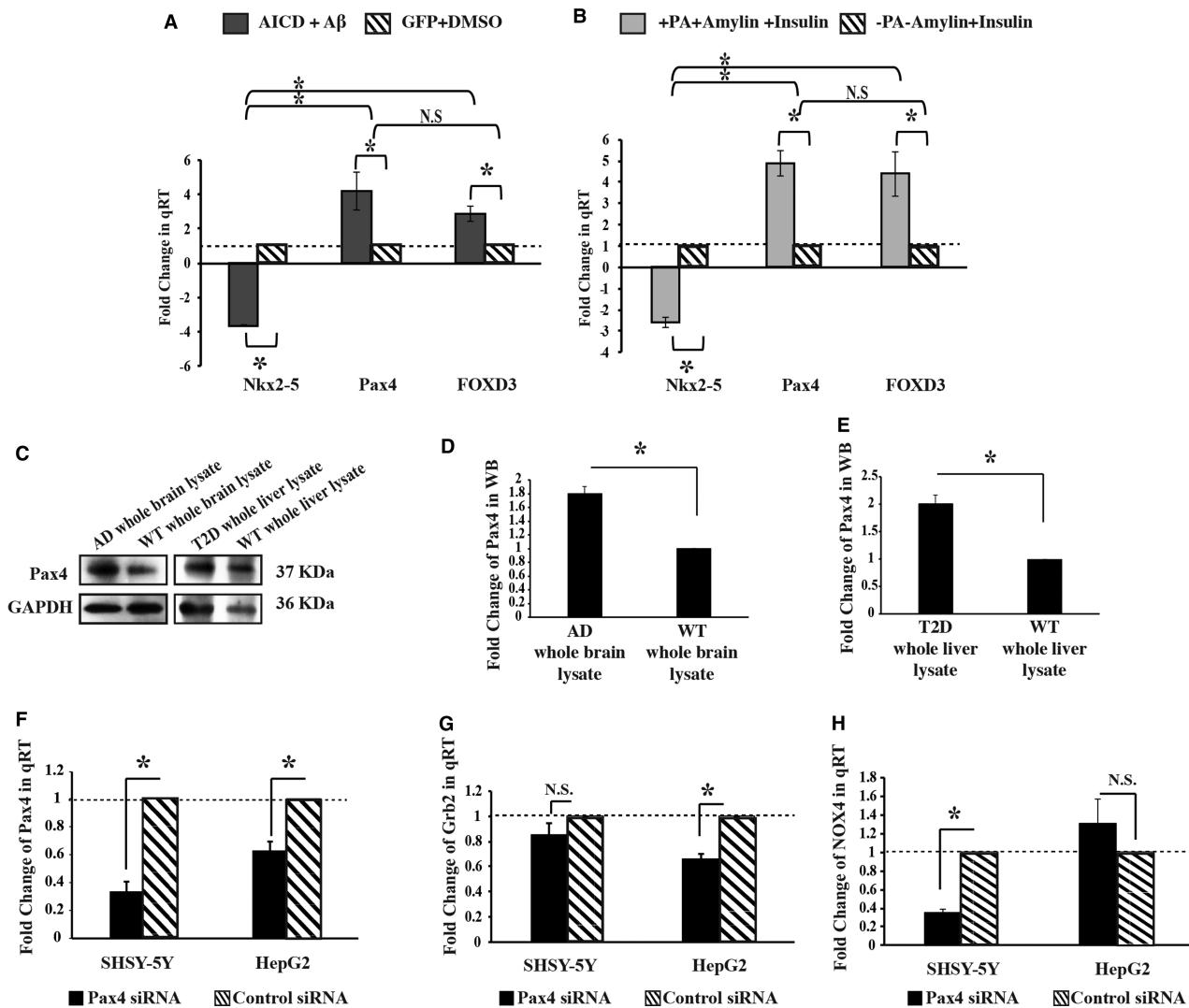
5.27 and 2.4 folds in human *post-mortem* liver tissue of T2D patients with respect to control, respectively (Figure 1D–F). Similarly, the transcript levels of Grb2 in T2D mice were raised by 3.01 fold (Figure 1G) and that of NOX4 in both AD and T2D mice showed significant up-regulation of 5.06 and 1.45 folds, respectively (Figure 1C,H). Additionally, Grb2 and NOX4 expression levels were up-regulated significantly in T2D mice (Supplementary Figure S3) and cell (Supplementary Figure S4) models.

In SHSY-5Y cells, knockdown of ALK and RYK down-regulated their expression levels by 2.42 (Supplementary Fig. S5A(i),B(i); \*  $P = 0.0088 < 0.05$ ;  $n = 3$ ) and 1.2 folds (Supplementary Figure S5A (ii),B(iii); \* $P = 0.019 < 0.05$ ;  $n = 2$ ), respectively. In HepG2 cells, knockdown of ALK and RYK reduced the expression levels of ALK by 1.38 fold (Supplementary Figure S5A(iv),B(ii); \*  $P = 0.0088 < 0.05$ ;  $n = 2$ ) whereas RYK did not show significant decrease (Supplementary Figure S5A(v),B(iv); N.S.;  $P = 0.22 > 0.05$ ;  $n = 2$ ). We designed double knockdown models for both ALK and RYK genes in SHSY-5Y and HepG2 cells (Supplementary Figure S5). Grb2 protein and transcript levels showed significant up-regulation for double knockdown condition of SHSY-5Y (1.22 fold in protein level, 4.08 fold in transcript level) (Supplementary Fig. S6A,B,F) and HepG2 cell lines (2.34 fold in protein level, 5.9 fold in transcript level), respectively (Supplementary Figure S6A,C,F). Similarly, protein and mRNA expression levels for NOX4 was also elevated significantly for both SHSY-5Y (1.35 fold in protein level 3.02 fold transcript level) (Supplementary Figure S6A,D,G) and HepG2 cell lines (2.62 fold in protein level 4.13 fold transcript level) (Supplementary Figure S6A,E,G). Interestingly, miRNA target analysis using miRDB revealed that both ALK and RYK were prominent target genes for miR-1271 (Supplementary Information S1). This was validated by the qRT-PCR results, which showed significant increase in miR-1271 transcript levels in both AD cell model and T2D cell model (palmitic acid and amylin treated HepG2 cells) by 3.8 and 3.7 folds, respectively (Figure 1I,J). Additionally, the bioinformatics analysis of MIR1271 gene gave us the geneenhancers using geneenhancer v4.8 database. The GH05J17641 showed the significantly high score compared with other geneenhancers and it had 186 transcription binding sites (Supplementary Figure S7). The SP1 transcription factor had the binding site in GH05J17641 geneenhancer.

**PAX4 regulates the transcription of GRB2 and NOX4**

To search for the molecular players behind *GRB2* and *NOX4* transcriptional up-regulation, we used Transfac® tool to search upto 10 Kb upstream of both the genes. In case of *GRB2*, 36 probable binding sites for 18 different TFs (Supplementary Table S5) were found, whereas, for *NOX4*, 32 probable binding sites for 16 different TFs (Supplementary Table S6) were noted. Comparing both the results, three (*Nkx2-5*, *Foxd3* and *PAX4*) top hits were selected among the six common (*Nkx2-5*, *Foxd3*, *PAX4*, *CHOP* C/EBP, *Oct1* and *Evi-1*) ones. The transcript levels of these three TFs were measured for both AD and T2D cell models (Figure 2A,B) and it was seen that whereas the mRNA levels of *Nkx2-5* were down-regulated, those of *PAX4* and *FOXD3* were up-regulated in both the models.

Specifically, perturbation of *PAX4* was most significant and noticeable. *PAX4* expression was measured by western blot and was found to be overexpressed in both AD and T2D cell models (Supplementary Figure S8). This was validated with clinical samples of AD and T2D (Figure 2C–E), where *PAX4* expression was up-regulated by 1.8 and 2 folds, respectively. Consequences of *PAX4* knockdown using Silencer® select *PAX4* siRNA constructing SHSY-5Y and HepG2 (Figure 2F) have been measured. Although non-significant in SHSY-5Y, the transcript level of *GRB2* decreased significantly in HepG2 (Figure 2G) consequently. Additionally, *PAX4* knockdown significantly decreased the level of *NOX4* in SHSY-5Y, and in HepG2, the change was insignificant (Figure 2H). We went further to measure the mRNA levels of *Nkx2-5*, *PAX4* and *FOXD3* in *ALK/RYK* double knockdown cells. qRT-PCR results showed +5.75, +5.84 and +3.13 folds' alterations, respectively, in SHSY-5Y (Figure 3A) and +2.91, +4.8 and +2.46 fold changes, respectively, in HepG2 (Figure 3B). Thus, *ALK/RYK* double knockdown cells



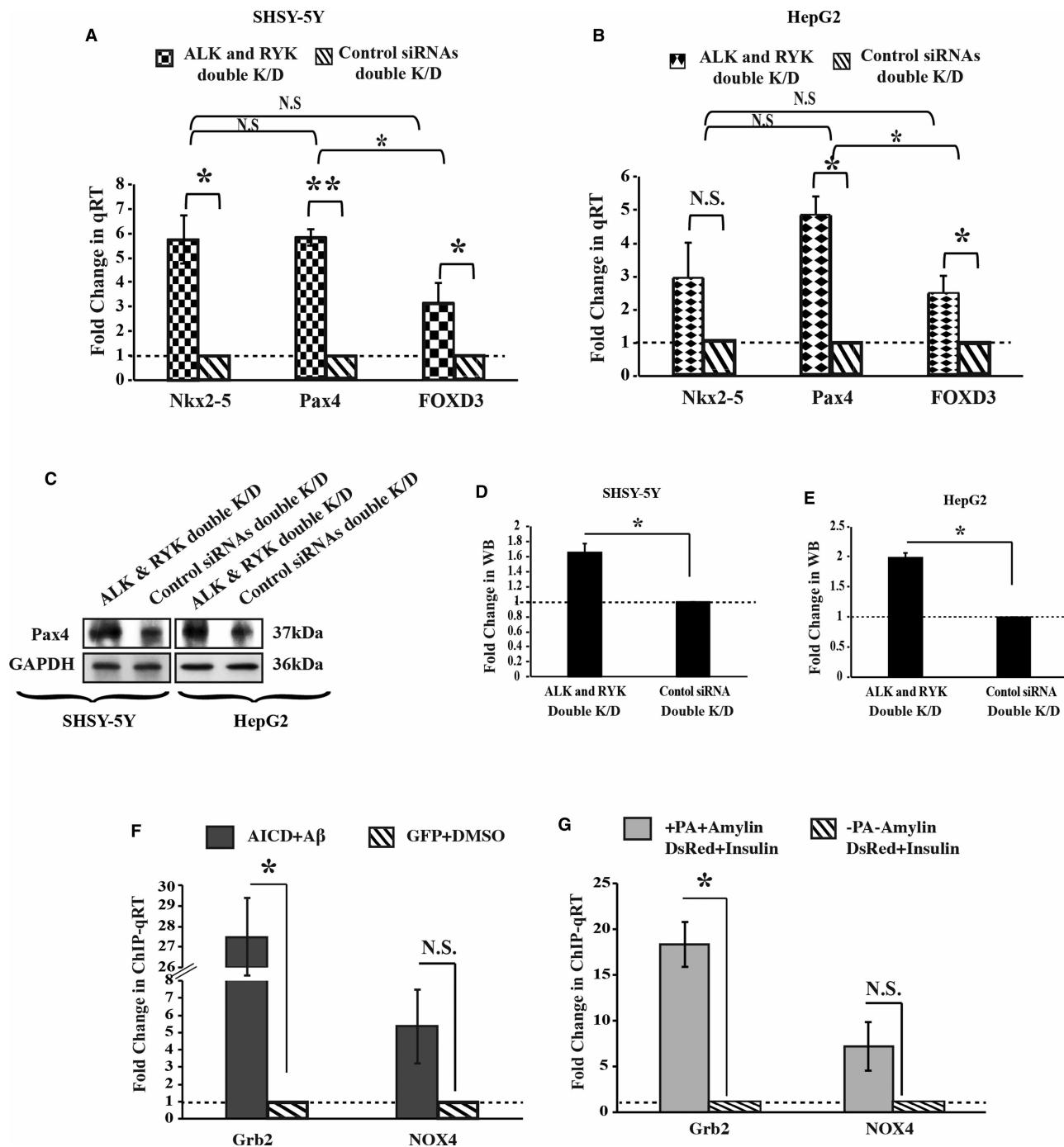
**Figure 2. Role of PAX4 in transcription of Grb2 and NOX4.**

(A) shows the transcript level alterations of -3.6 fold for *Nkx2-5*, +4.19 fold for *PAX4* and +2.89 fold for *FOXD3* in AD (AICD + Aβ) cell models compared with control. Similarly, (B) shows the transcript level alterations of -2.59 fold for *Nkx2-5*, +4.88 fold for *PAX4* and +4.39 fold for *FOXD3* in T2D (+PA, +Amylin, +Insulin) cell models compared with controls. (C) shows PAX4 protein overexpression by 1.8 and 2.00 folds by Western Blot in (D) AD patients' whole brain samples and (E) T2D patients' whole liver samples, respectively. The alterations in transcript levels of (F) endogenous *PAX4* [in SHSY5Y 2.99 fold and in HepG2 1.58 fold], (G) *GRB2* [in SHSY-5Y 1.16 fold and in HepG2 1.52 fold], and (H) *NOX4* [in SHSY5Y 2.83 fold and in HepG2 2.3 fold] in PAX4 knockdown situation in SHSY5Y and HepG2 cell lines. All statistical information is compiled in Supplementary Table S7.

resembled AD and T2D cell models in terms of *PAX4* up-regulation. Expectedly, both the double knockdown models showed significant up-regulation of PAX4 protein levels in SHSY-5Y and HepG2 by 1.65 and 1.98 folds, respectively (Figure 3C–E). Furthermore, Chromatin Immuno-precipitation (ChIP) assays confirmed elevated recruitment of PAX4 protein on the *GRB2* and *NOX4* upstream regions. For the AD cell model PAX4 recruitment increased by 27.49 and 5.35 folds (Figure 3F) and in T2D cell model it was elevated by 18.33 and 7.22 folds (Figure 3G), for *GRB2* and *NOX4* genes, respectively.

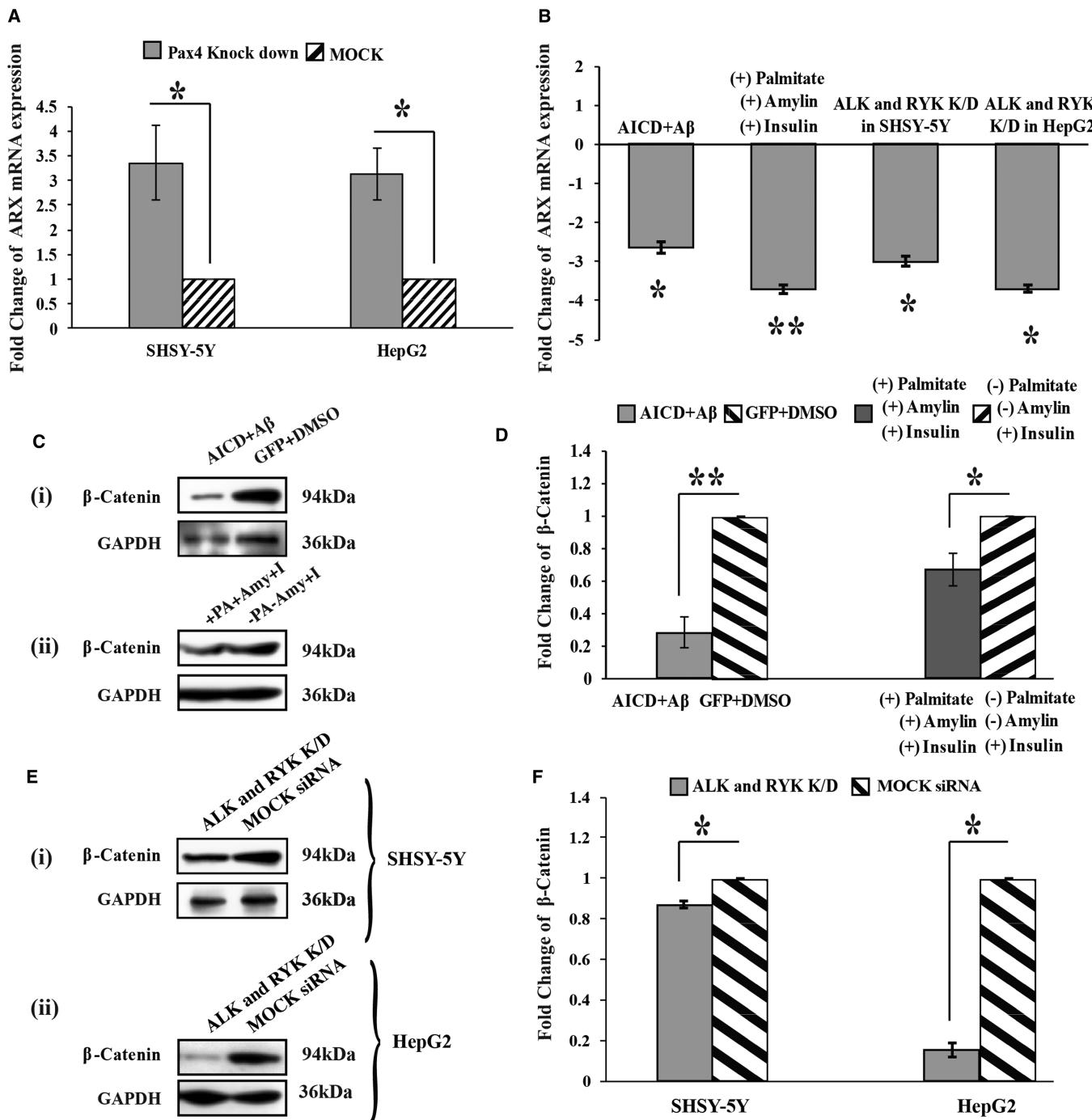
## ARX couples ALK/Ryk down-regulation with PAX4 via β-Catenin signaling

In the course of exploring the mechanism behind PAX4 up-regulation in the degenerative diseases, the role of ARX was evident. The significant up-regulation of ARX transcript levels by 3.3 and 3.1 folds in PAX4



**Figure 3. Effect of ALK and RYK double knockdown on PAX4 levels.**

The transcript level alterations of *Nkx2-5*, *PAX4* and *FOXD3* in ALK and RYK double knockdown (K/D) situation in (A) SHSY-5Y [+ 5.75 fold for *Nkx2-5*, +5.84 fold for *PAX4* and +3.13 fold for *FOXD3*] and (B) HepG2 cell line [+2.91 fold for *Nkx2-5*, +4.81 fold for *PAX4* and +2.46 fold for *FOXD3*]. (C) shows the PAX4 protein level alterations by Western Blot in ALK and RYK double knockdown (K/D) model in both SHSY-5Y and HepG2 cell lines. (D and E) histograms that graphically denotes the up-regulation of endogenous PAX4 levels in double knockdown model in both SHSY-5Y [+1.65 fold] and HepG2 cells [+1.98 folds], respectively. PAX4 binds to the upstream region of Grb2 and NOX4 gene. The ChIP data shows that PAX4 significantly up-regulates *GRB2* expression in both (F) AD [+27.49 fold] and (G) T2D [+18.33 fold] cell models by binding at its upstream region and acting like an enhancer. In case of *NOX4*, PAX4 fails to significantly up-regulate its expression in both (F) AD [+5.35 fold] and (G) T2D [+7.22 fold] cell models. All the statistical information is available on Supplementary Table S7.



**Figure 4. Role of ARX and β-Catenin in AD and T2D cell model and in ALK/RYK double knockdown model.**

(A) shows that ARX transcript level is being up-regulated in PAX4 knockdown condition by 3.35 and 3.13 fold by qRT-PCR in both SHSY-5Y and HepG2 cells, respectively. (B) Shows the down-regulation of ARX transcript levels by 2.6, 3.7, 3 and 3.7 folds in AD (AICD + A $\beta$ ) and T2D (+PA, +Amylin, +Insulin) cell models and also in ALK/RYK double knockdown conditions in SHSY-5Y and HepG2 cells, respectively. (C) Western blot showing the reduction in β-Catenin expression levels in (i) AD and (ii) T2D cell model. (D) Histogram representing β-Catenin being down-regulated by 3.5 and 1.5 fold in AD and T2D cell models, respectively. (E and F) shows the down-regulation of β-Catenin expression levels in ALK and RYK double knockdown situation in both (i) SHSY-5Y and (ii) HepG2 cells by 1.15 and 6.5 folds, respectively. All the statistical information is available in Supplementary Table S7.

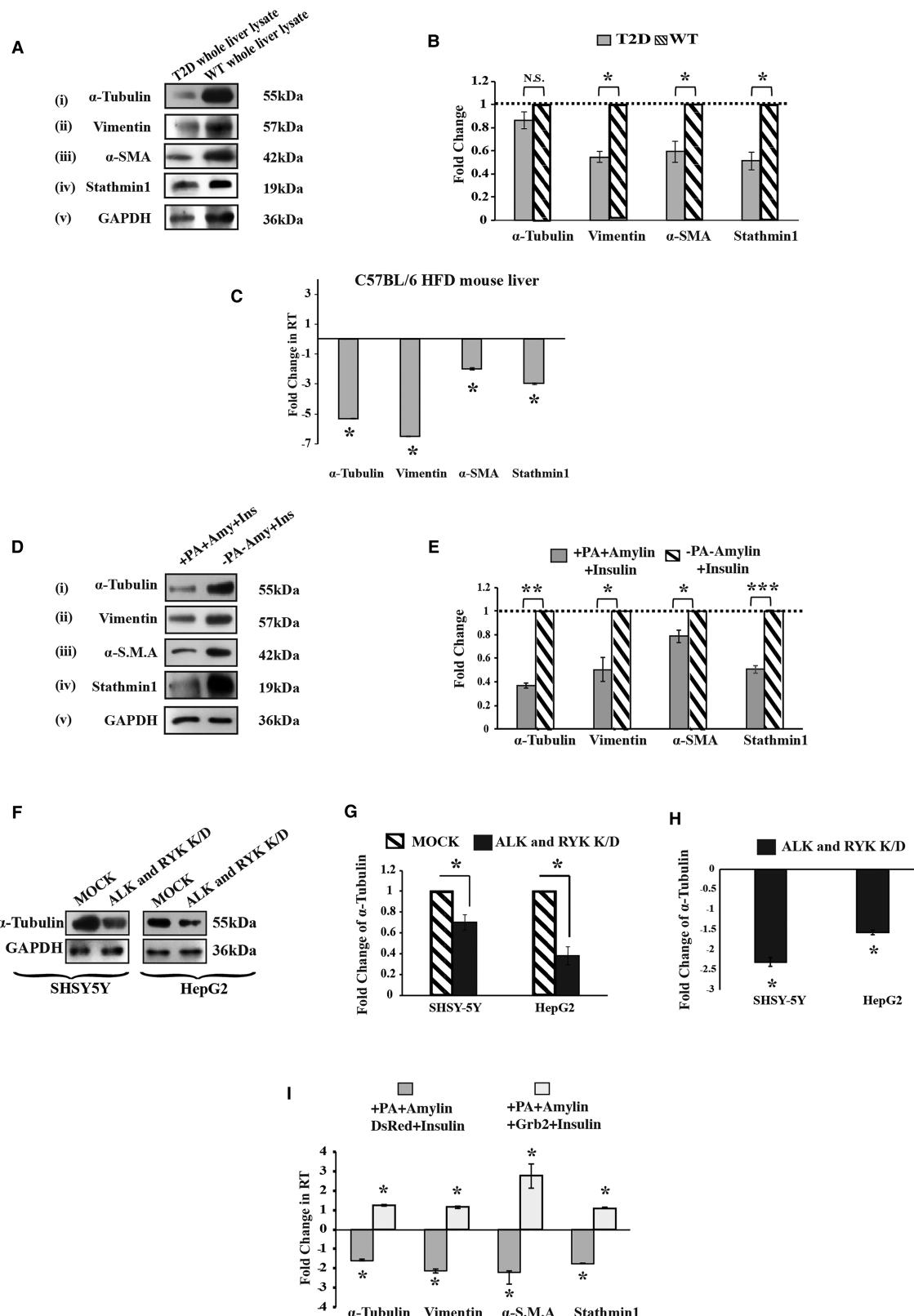
knockdown conditions, in both SHSY-5Y and HepG2 cells, established the mutually repressive natures of ARX and PAX4 (Figure 4A). Moreover, the ARX transcript levels were significantly down-regulated by 2.6, 3.7, 3 and 3.7 folds in the AD and T2D cell models and *ALK/RYK* double knockdown in both SHSY-5Y and HepG2 cells, respectively (Figure 4B). Additionally,  $\beta$ -Catenin's role as ARX-regulator was also established by measuring its expression levels. Western blots showed significant down-regulation of  $\beta$ -Catenin by 3.5 and 1.5 folds in AD and T2D cell models, respectively (Figure 4C,D). The *ALK/RYK* double knockdown also showed a significant  $\beta$ -Catenin down-regulation by 1.15 and 6.5 folds in both SHSY-5Y and HepG2 cells, respectively (Figure 4E,F).

## Expressions of cytoskeletal proteins change in conjunction with ALK/RYK deactivation

To explore cytoskeletal degradation, the protein and transcript levels of four cytoskeleton proteins (viz.,  $\alpha$ -Tubulin, Vimentin,  $\alpha$ -Smooth muscle actin ( $\alpha$ -SMA) and Stathmin1) were compared between the whole liver tissue of T2D patients and non-Diabetic whole liver samples. The relative protein levels were down-regulated by 1.16 fold for  $\alpha$ -Tubulin, 1.83 fold for Vimentin, 1.68 fold for  $\alpha$ -SMA, and 1.95 fold for Stathmin1, respectively (Figure 5A,B). The transcript levels also showed significant (-5.3 fold  $\alpha$ -tubulin; -6.49 fold Vimentin; -2 fold  $\alpha$ -SMA and -2.9 fold Stathmin1) down-regulation in T2D mice (Figure 5C). Similarly, in the T2D cell model the relative protein levels were down-regulated by 2.7 fold for  $\alpha$ -Tubulin, 1.98 fold for Vimentin, 1.27 fold for  $\alpha$ -SMA and 1.97 fold for Stathmin1, respectively (Figure 5D,E). Moreover, to link degeneration with ALK/RYK deactivation, we compared the protein and the transcript levels of  $\alpha$ -Tubulin in *ALK/RYK* double knockdown conditions. A significant reduction in protein levels (2.64 and 1.42 folds, respectively) was observed in both SHSY-5Y and HepG2 cell lines (Figure 5F,G). Similarly, transcript levels of  $\alpha$ -Tubulin were also down-regulated by 2.3 and 1.5 folds for both SHSY-5Y and HepG2 cell lines, respectively (Figure 5H). In both Palmitate and Amylin treated situations, the percentage recovery of cytoskeletal proteins from disassembly, upon Grb2 overexpression, up-regulated the expressions of  $\alpha$ -Tubulin, Vimentin,  $\alpha$ -SMA and Stathmin1 by 98.2%, 84.39%, 508.8% and 62.2%, respectively (Figure 5I).

## The signaling pathways also show a reversal of outcome through Grb2–NOX4 interaction

While investigating the pathways that could be responsible for degradation of cytoskeletal proteins, involvement of three small GTPases viz., RhoA, Rac1 and Cdc42 (Figure 6A,B) was observed. Similar to AD situations, under Palmitate and Amylin treated disease inducing conditions, the expression levels of RhoA and Rac1 decreased significantly by 2.13 ( $n = 3$ ) and 1.63 folds ( $n = 3$ ) respectively and the Cdc42 protein levels increased by 64.2% ( $n = 3$ ). Down the line, the significantly reduced Cofilin activity bounced back by 43.2% (Figure 6C,D) upon Grb2 overexpression and Palmitate/Amylin treatment. Besides these, SSH-1's (an activator of Cofilin through dephosphorylation) distal upstream effector NOX4 was overexpressed significantly by 1.31 fold post Palmitate/Amylin treatment, that did reduce significantly by 1.26 fold (Figure 6E,F) upon Grb2 overexpression. Interestingly, Nox4, an interactor of Grb2, was found to be 1.34 fold overexpressed endogenously in T2D cell model but reduced in the presence of Grb2 (Figure 6E,F). We validated the interaction between NOX4 and Grb2 with co-immunoprecipitation (Co-IP) experiment. We pulled down the interacting complex by anti-Grb2 antibody and probed the expression of NOX4 in that complex by immunoblot. The interaction of Grb2 with NOX4 was enhanced 1.35 fold in T2D scenario (Figure 7A,B). Furthermore, the intensity of interaction of NOX4 and Grb2 was checked in T2D mouse liver lysate that increased 2.87 fold in T2D situation compared with the wild type (Figure 7C,D). Besides the reversal, we also measured the ROS activities of Palmitate/Amylin and Palmitate/Amylin/Grb2 by flow cytometry by using CMH2-DCFDA ROS indicator. Although overexpressed Grb2 could significantly reverse the effects of many T2D related metabolic changes, to our surprise in the working T2D like model, over-expression of Grb2, instead of reducing the activity of ROS, rather elevated it by 3.57 fold (Figure 7E,F). Nevertheless, the extent of this limited fate reversal upon Grb2 overexpression was estimated, and in both Palmitate and Amylin treated situations, Grb2 overexpression up-regulated the expressions of cytoskeletal proteins significantly.



**Figure 5. Participation of ALK and RYK in signaling events leading to cytoskeleton degradation and Grb2 mediated reversal in T2D: cytoskeleton degradation.**

Part 1 of 2

(A) Representative western blots ( $n = 2$ ) of four cytoskeletal proteins (i)  $\alpha$ -Tubulin, (ii) Vimentin, (iii)  $\alpha$ -SMA and (iv) Stathmin1 with (v) GAPDH used as

**Figure 5. Participation of ALK and RYK in signaling events leading to cytoskeleton degradation and Grb2 mediated reversal in T2D: cytoskeleton degradation.**

Part 2 of 2

internal control in human diabetic whole liver lysates, compared with wild type whole liver lysate. (B) Histogram representing the mean value of optical density of the protein bands, normalized against GAPDH, with a decrease in 1.16 fold for  $\alpha$ -Tubulin, 1.83 fold for Vimentin, 1.68 fold for  $\alpha$ -SMA and 1.95 fold for Stathmin1. Samples are derived from the same experiments and the blots are processed in parallel. (C) Shows transcript level changes in  $\alpha$ -Tubulin (−5.3 fold), Vimentin (−6.49 fold),  $\alpha$ -SMA (−2 fold), and Stathmin1 (−2.9 fold) by qRT-PCR in C57BL/6 mice on OWD compared with normal diet fed controls. (D) Western blots depict alteration in the expression of (i)  $\alpha$ -Tubulin, (ii) Vimentin, (iii)  $\alpha$ -Smooth muscle actin ( $\alpha$ -SMA) and (iv) Stathmin1 with GAPDH in T2D cell model (PA, +Amylin, +Insulin induced HepG2 cells). The samples are derived from the same experiments and the blots are processed in parallel. (E) Histograms showing changes in the four cytoskeletal proteins, normalized by GAPDH, with decrease 2.7 fold for  $\alpha$ -Tubulin, 1.98 for Vimentin, 1.27 fold for  $\alpha$ -SMA and 1.97 fold for Stathmin1. ALK and RYK double knockdown condition controls  $\alpha$ -Tubulin degradation. (F and G) shows in western blot, the decrease in  $\alpha$ -Tubulin in both SHSY-5Y [−2.64 fold] and HepG2 cell line [−1.42 fold] in ALK and RYK double knockdown (K/D) situation. (H) shows the  $\alpha$ -Tubulin transcript level down-regulation in ALK and RYK double knockdown (K/D) model in both SHSY5Y [−2.3 fold] and HepG2 cell lines [−1.5 fold] by qRT-PCR. (I) Shows transcript level changes for the four cytoskeletal proteins in T2D (PA +Amyli +Insulin induced condition) with or without Grb2. All the statistical information is available on Supplementary Table S7.

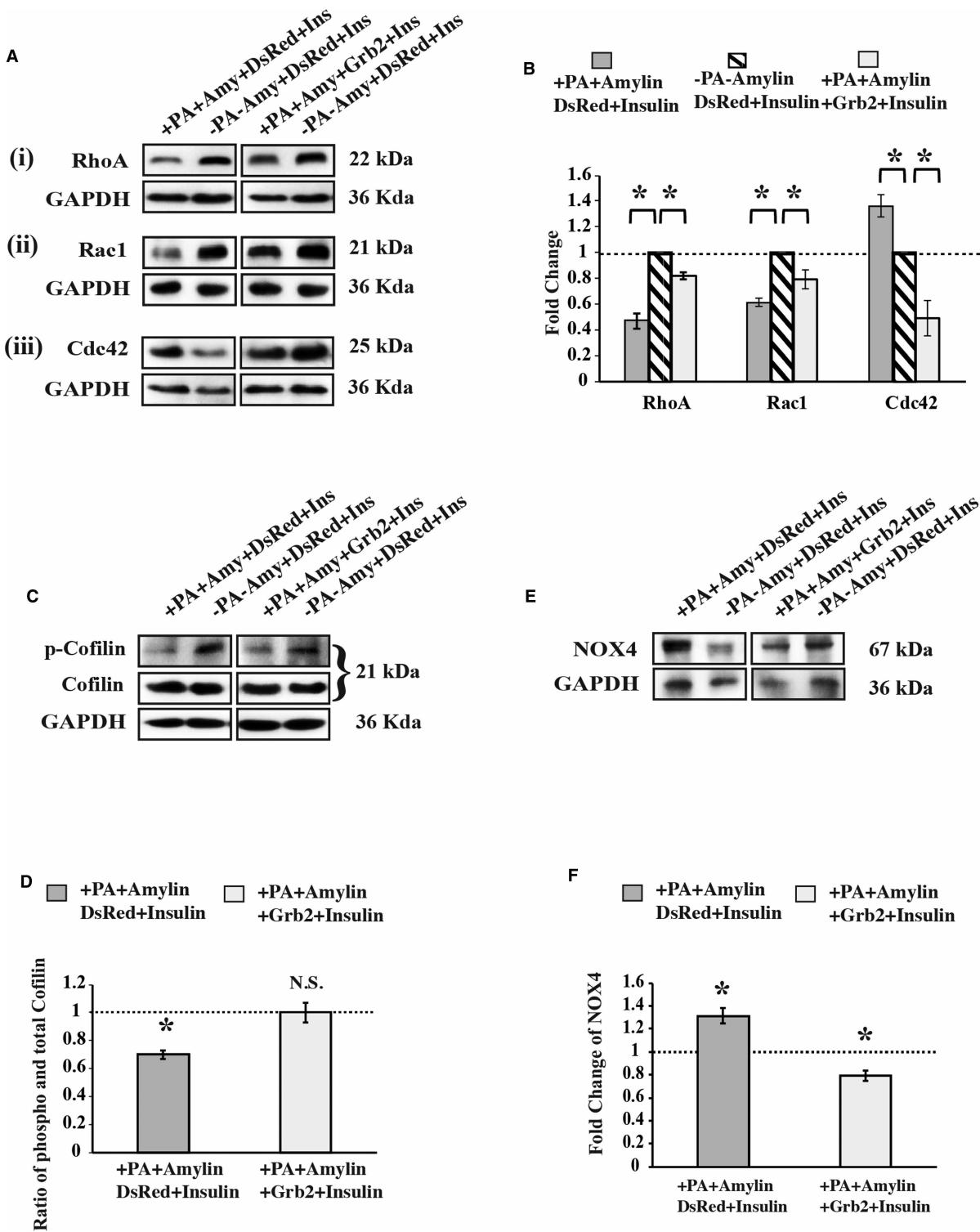
## Discussion

This work unveils the commonality of two diverse diseases, AD and T2D. Despite efforts to relate the two for more than a decade, none of the studies focused on the signaling components and their possible convergence on a transcription factor.

The precise common signaling mechanism for AD and T2D is still unclear, albeit the fact that both the diseases confer insulin resistance. Up until our recent work, Insulin Receptor (IR) family was the only RTKs known to be involved in the signaling in both the diseases [6]. Profiling the activities of other RTKs in the two diseases opened up a larger picture and the effects of both A $\beta$  and Amylin oligomers were predicted to have impacts on other receptor tyrosine kinases [6].

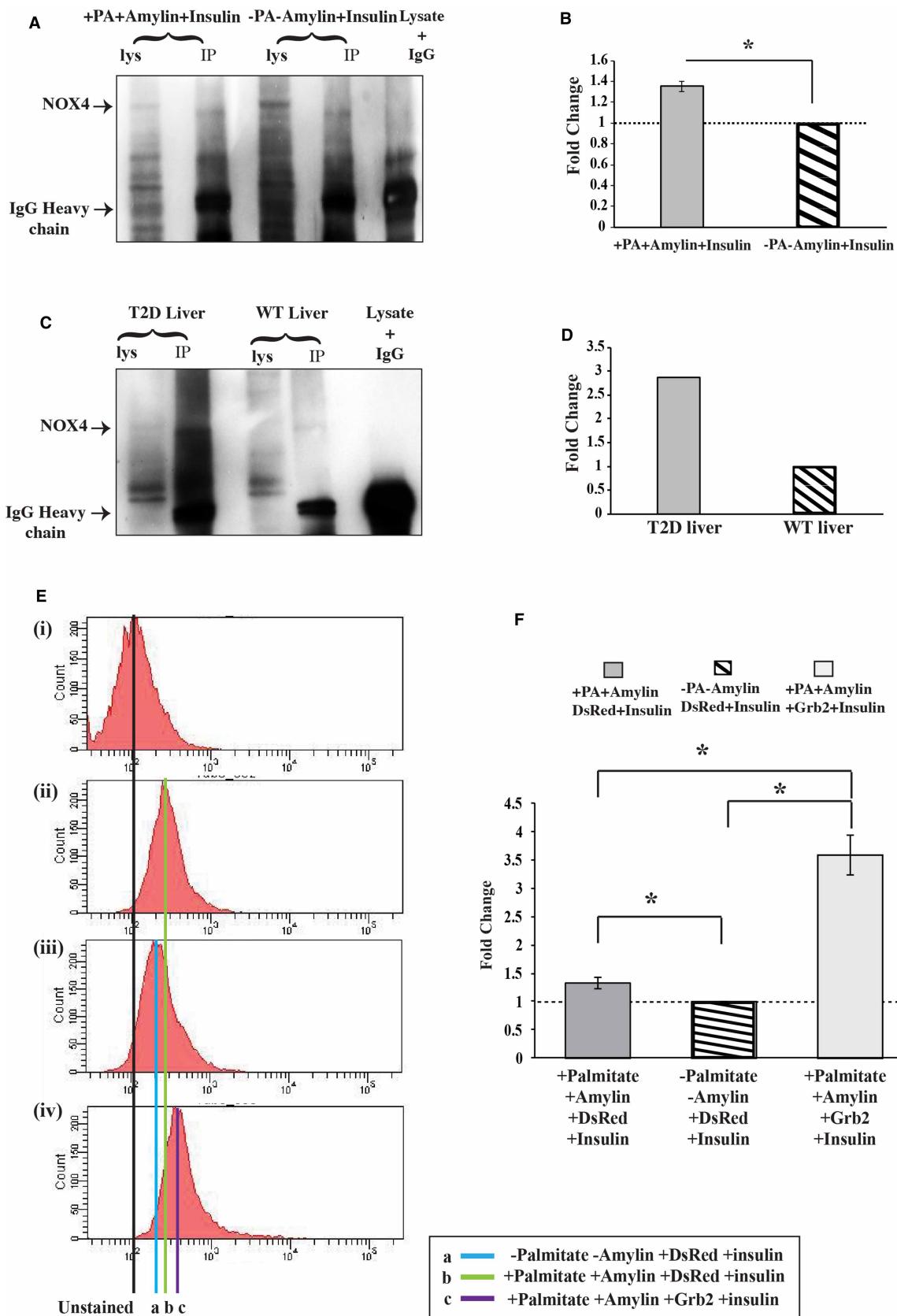
Amongst all the common RTKs, ALK and RYK were the two showing similar levels of deactivation in all working models of AD and T2D [6]. ALK, a member of insulin receptor superfamily, is commonly known for its involvement in many cancer types, especially in non-small-cell lung cancer (NSCLC) [63]. RYK is a co-receptor of non-canonical Wnt signaling [64]. The involvement of Wnt signaling pathway in AD [65] and T2D [66,67] is well established. We further verified the association of classical Wnt pathway through the down-regulation of  $\beta$ -Catenin (Figure 4C–F) and up-regulation of GSK3 $\beta$  [6,19] in both diseases. This is a significant revelation considering that  $\alpha$ -Tubulin is down-regulated in T2D conditions, and that the activity of Gsk3 $\beta$ , a kinase that would hyperphosphorylate Tau leading to destabilization of the microtubule network, increases under disease inducing Palmitate/Amylin treatment [6]. The activity of its upstream effector AKT1 also decreases under T2D inducing condition [6].

Recent reports and our real-time PCR data (Figure 1I,J) have revealed the active involvement of miR-1271 in both the diseases, AD [34] and T2D [35]. miR-1271 and miR-96 are known paralogs to each other [68]. The mirDB [61] target analysis of both miR-1271 (Supplementary Information S1) and miR-96 (Supplementary Information S2) have also confirmed their roles in the ALK and RYK down-regulation. This observation is further corroborated by Kong et al., who have demonstrated ALK as the target for miR-1271 in oral squamous cell carcinoma (OSCC) [69]. RYK was observed as a target gene for miR-96, the paralog of miR-1271 [68,70,71]. Additionally, the expression of miR-96 is also up-regulated in Alzheimer's disease [72]. Up-regulated expression of miR-1271, or its paralog, in both the diseases, and their targeting of both ALK and RYK are well perceived. The mirDB [61] analysis further demonstrated that mechanistic target of rapamycin (mTOR) is targeted by both miR-1271 and miR-96 [Supplementary Information 1 and 2]. Several studies confirmed that down-regulation of mTOR led to autophagy [73–75]. Concomitantly, both AD [76] and T2D [77] induced autophagy by the inhibition of mTOR protein. Thus, the elevated levels of miR-1271 could affect both AD and T2D not only by ALK/RYK, but also through the mTOR'autophagy pathway. Furthermore, the gene-hancer analysis revealed SP1 (specificity protein 1) as one of the putative transcription factors of miR-1271. Besides, the role of SP1 in the expression of several AD-related proteins, including amyloid- $\beta$  protein precursor



**Figure 6. Signaling molecules participate in T2D.**

(A) Western blot showing protein level changes of small GTPases i.e. (i) RhoA [-2.13 fold and in presence of Grb2 -1.22 fold], (ii) Rac1 [-1.63 fold and in presence of Grb2 -1.26 fold] and (iii) CDC42 [+1.36 fold and in presence of Grb2 -2.05 fold] in T2D inducing (+PA, +Amylin, +Insulin in HepG2 cells) and in reversing conditions (+PA, +Amylin, +Insulin, +Grb2 in HepG2 cells). In (B) Bar diagram represents the activity alterations for the small GTPases. (C and D) Western blots depict the protein levels or activation of signaling molecules like Cofilin [-1.43 fold]. (E and F) depict NOX4 [+1.31 fold and in presence of Grb2 -1.26 fold] by Western blot. All the statistical information is available in Supplementary Table S7.



**Figure 7.** Grb2 and NOX4 interaction prevents cytoskeletal degradation in T2D like scenario and ROS activity. Part 1 of 2 (A) shows the variation of interaction of Grb2 and NOX4 in T2D inducing (+Palmitate, +Amylin and +Insulin in HepG2) conditions

**Figure 7. Grb2 and NOX4 interaction prevents cytoskeletal degradation in T2D like scenario and ROS activity.** Part 2 of 2 compared with controls (–Palmitate, –Amylin and +Insulin in HepG2). (B) graphical representation of the intensity of the interaction between NOX4 and Grb2. (C) shows the variation of interaction of Grb2 and NOX4 in type 2 diabetic mouse (OWD C57BL/6) whole liver lysate compared with WT (Normal fed C57BL/6) control. (D) graphical representation of the intensity of the interaction between NOX4 and Grb2 in T2D mouse liver lysate. ROS activity Assay. (E) (i), (ii), (iii) and (iv) show the FACS data for ROS activity of unstained, –Palmitate –Amylin +DsRed +Insulin, +Palmitate, +Amylin, +DsRed, +Insulin and +Palmitate, +Amylin, +Grb2, +Insulin, respectively, in HepG2 cells. (F) Shows graphically that ROS activity increases in T2D inducing (+Palmitate, +Amylin, +DsRed, +Insulin) condition by 1.3 fold and in presence of Grb2 ROS activity further significantly increases by 3.5 fold. All the statistical information is available on Supplementary Table S7.

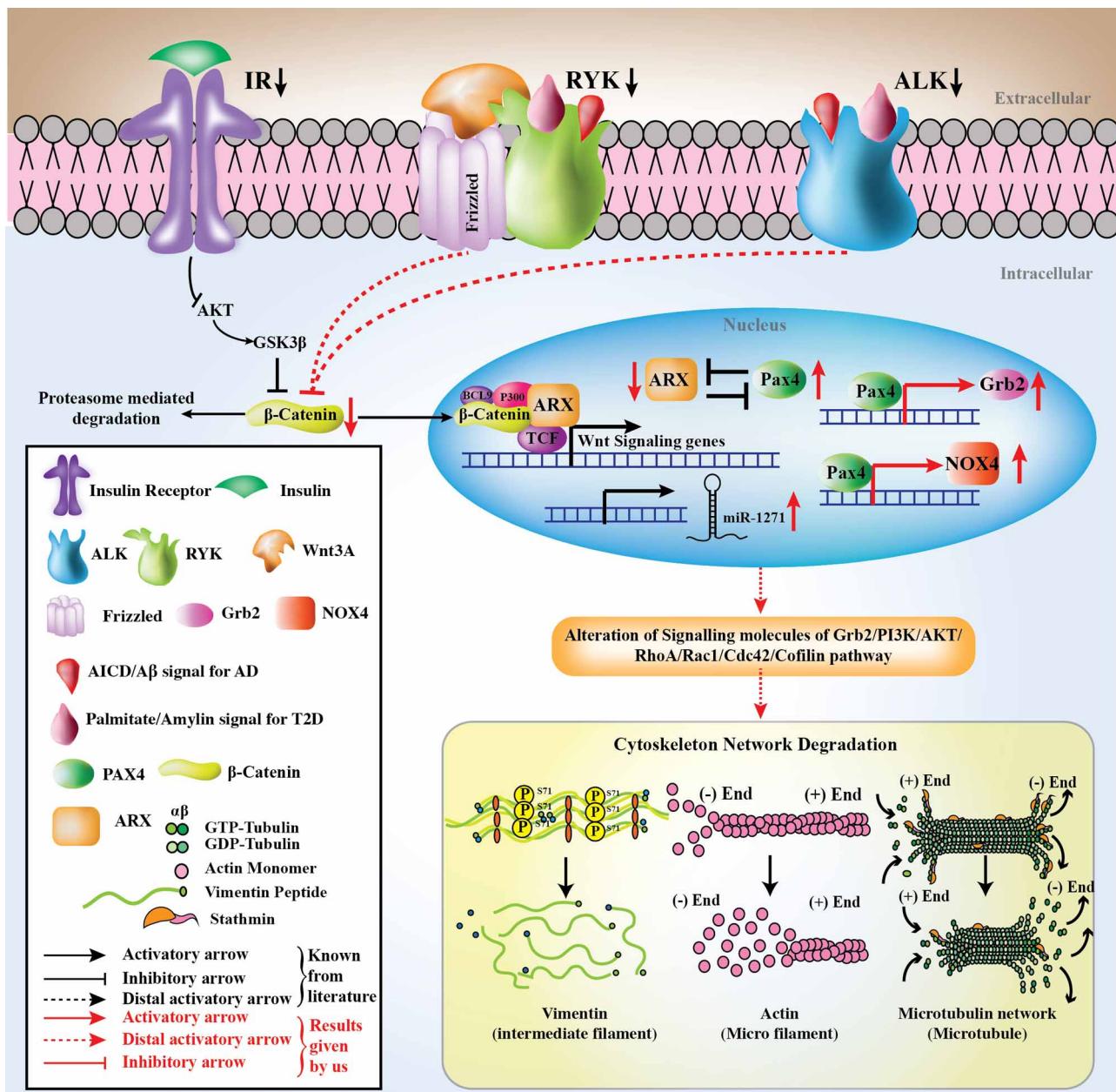
(APP), BACE1 and tau is well documented [78,79]. Similarly, SP1 plays a crucial role in the development of insulin resistance in T2D [80,81]. Therefore, elevated levels of SP1 could be the reason behind up-regulation of miR-1271.

Grb2 happens to be a common downstream adapter for both the RTKs [63,82]. It was shown previously that Grb2 strengthened its interaction with NOX4 to rescue the cytoskeleton degradation in AD like situations [19]. We postulate that the two RTKs, ALK and RYK, might act like non-canonical receptors with the potential to become a significant link between AD and T2D via Grb2 and NOX4.

The downstream consequences at the molecular level for both the signals were significant compromise of cytoskeleton integrity. Interestingly, ALK and RYK double knockdown cell lines also resembled similar phenotypes (Figure 5F–H). Searching for molecules that could connect the common RTKs with downstream cytoskeleton degradation, we singled out Grb2 and NOX4, both of which had elevated levels in the disease

**Table 1 A summary of status of dysregulated proteins in AD and T2D disease conditions**

SI No.	Name of protein	Upstream effector/effect	Downstream effector/effect	Status in disease condition	
				AD	T2D
1	ALK	miR-1271	Grb2, NOX4	↓[6]	↓[6]
2	RYK	miR-1271	Grb2, NOX4	↓[6]	↓[6]
3	Grb2	ALK, RYK, PAX4	Recover Cytoskeleton Proteins degradation after Grb2–NoX4 interaction	↑[19]	↑
4	NOX4	Reactive Oxygen Species (ROS) [95], Rac1 [96], ALK, RYK, PAX4	SSH-1 [18,19], Recover Cytoskeleton Proteins degradation after Grb2–NoX4 interaction	↑[19]	↑
5	PAX4	ARX	Grb2, NOX4	↑	↑
6	ARX	β-Catenin	PAX4	↓	↓
7	β-Catenin	GSK3β	ARX	↓	↓
8	GSK3β activity	AKT1	β-Catenin	↑[6]	↑[6]
9	AKT1 activity	PTEN [97]	GSK3β	↓[6]	↓[6]
10	Cytoskeleton Proteins (α-Tubulin, Vimentin, α-SMA, Stathmin1)	RhoA, Rac1 and Cdc42	Degeneration of cell	↓[19]	↓
11	RhoA	AKT1 [98]	Cytoskeleton proteins	↓[19]	↓
12	Rac1	AKT1 [98]	Cytoskeleton proteins	↓[19]	↓
13	Cdc42	AKT1 [98]	Cytoskeleton proteins	↑[19]	↑
14	Cofilin activity	LIMK [99]	F-Actin	↓[19]	↓

**Figure 8. Summary diagram.**

A cartoon representation summarizing the overlap of signaling pathways for both AD and T2D, mediated via the down-regulation of membrane bound ALK/RYK, consequent up-regulation of the transcription factor PAX4, which in turn up-regulates Grb2/NOX4. These effectors, through the signaling molecules, affect the fate of the cytoskeletal proteins.

scenarios (Figure 1; Supplementary Figures S2–S4). Several reports on Grb2 strongly suggested its role in cellular survival in AD [55,57]. Transcript levels of the cytoskeletal protein components were checked and were found to increase several folds with Grb2's overexpression in both AD [19] and T2D models (Figure 5I).

It was prudent therefore to try to understand the underpinning cellular mechanisms that help in the cytoskeletal restructuring, with possibly Grb2 playing a pivotal role. The expressions of three small GTPases, RhoA, Rac1 and Cdc42, known to regulate cell morphology through rearrangement of cytoskeletal proteins [83–85]

acting as molecular switches, were significantly altered and again renormalized with overexpression of Grb2. These alterations in the activities of small GTPases were sufficient to perturb the downstream signaling events and, ultimately, the cytoskeletal proteins were degraded primarily through Cofilin mediated mechanism. Cofilin is a downstream effector of RhoA, Rac1 and Cdc42 and it is one of the actin-binding proteins whose dephosphorylation enables actin depolymerization [86]. These results convincingly implies similar pathways for the rearrangement of the cytoskeleton network in AD and T2D. Grb2's intervention in both disease models significantly inactivates Cofilin by phosphorylation [19] (Figure 6C,D), a crucial regulator of actin dynamics [87]. Similar to the case in AD, in T2D also Grb2 helps reversing the signals involved in the degradation of cytoskeletal proteins.

Abnormal NOX activation is already reported in T2D [88] leading to its interaction with Grb2 and Src activation [18]. Adapter protein NOX4, from the ROS production pathway, is another Cofilin regulator in conjunction with Slingshot homolog-1 (SSH-1), the phosphatase of Cofilin. Both the disease models showed significant up-regulation of NOX4 (Figure 6E,F), which was subsequently decreased with Grb2's overexpression [19]. These small checks and balances, at different levels along the signaling cascades, culminated in a larger scale perturbation in the cytoskeleton network and Grb2's role emerged as a reversing switch of these perturbations (Figure 5I) [19]. Furthermore, while examining other effects on cytoskeleton integrity due to Grb2's overexpression, it was noted that NOX4 interacted with Grb2 in normal conditions [17,18] which increased several folds under both AD [19] and T2D disease conditions (Figure 7A–D). As NOX4 was responsible for ROS generation, we also checked whether Grb2 overexpression could put a check on the ROS, which it could not. On the contrary, the ROS activity had increased in the presence of too much of Grb2 (Figure 7E,F). This might be a hint towards the fact that even though the cells geared up the protective mechanisms, the defense was lost with the progression of the disease and beyond a threshold.

The study unraveled the relation of ALK and RYK in controlling the cytoskeleton integrity through the overexpression of Grb2 and NOX4 (Supplementary Figure S6), with miR-1271 as the master-regulator controlling ALK/RYK expression (Supplementary Information S1; Figure 11J). Employing bioinformatics tools and qRT-PCR, we identified PAX4 as a central regulator (Supplementary Tables S5,S6; Figures 2A,B,F–H, 3A, B), which is also crucial in regulating the gene network governing  $\beta$ -cell mass expansion and survival under the pathophysiological conditions of T2D [89]. Recent studies have shown association of *PAX4* mutations with T2D in Japanese and Afro-Americans populations [42,90]. However, *PAX4* gene dysfunction increases the susceptibility of apoptosis along with reducing cell proliferation leading to a gradual loss of  $\beta$ -cell and ultimately to diabetes [89]. Interestingly, the PI3K inhibitor, Wortmannin, showed potential to induce both insulin resistance and *PAX4* expression [89,91]. Naturally, *PAX4* emerged as a survival gene because of its role in regulating both  $\beta$ -cell mass expansion and Grb2 expression. On the other hand, the antagonism between *PAX4* and ARX (Figure 4A) could connect the aberrant Wnt/ $\beta$ -Catenin signaling with the up-regulation of *PAX4* via reduction in ARX in both the diseases (Figure 4B). This helps connect the dots between the deactivation of ALK and RYK with the down-regulation of  $\beta$ -Catenin expression (Figure 4C–F) levels, followed by a decrease in ARX. Thus, down-regulation of ALK and RYK implies an elevation of the *PAX4* level (Figures 2C–E, 3C–E; Supplementary Figure S8), which in turn up-regulates Grb2 and NOX4 in both AD and T2D.

NOX4 reportedly induces mitochondrial dysfunction by inhibiting the mitochondrial chain complex 1 [92]. Alterations in the expression of genes coding for mitochondrial and cytoskeletal proteins contribute to the mitochondrial dysfunction observed in insulin-resistant conditions of both AD and T2D [93,94]. Interestingly, the majority of differentially expressed genes targeted by *PAX4* are commonly enriched in both oxidative phosphorylation and neurodegenerative diseases [45]. Besides, this work establishes *PAX4* as a promising candidate behind up-regulation of *GRB2* and *NOX4* in T2D, acting as the coveted ‘missing link’ between AD and T2D's common signaling pathways (Figures 2C–H, 3C–G; Supplementary Figure S8). Like a pivot, it links ALK, RYK as upstream receptors and Grb2, NOX4 as downstream adapters, eventually affecting the cytoskeleton. The status of all the dysregulated proteins involved in this study are compiled in Table 1.

In the context of Insulin Receptor (IR) insensitivity being the pathological hallmark of both diseases, previous findings called for understanding the roles of other members of the RTK family. For the first time two non-canonical receptors (ALK or RYK) have been shown to link disparate signals (AICD/A $\beta$  and Palmitate/Amylin) leading to similar pathways (Grb2/PI3K/AKT/RhoA/Rac1/Cdc42/Cofilin or NOX4/SSH-1/Cofilin) that ultimately culminate in similar mechanistic consequences (degradation of cytoskeleton network) (Figure 8; Supplementary Figure S9).

## Conclusions

The emerging model from this study would help understand both the diseases from each other's perspectives. The work unraveled (a) a novel avenue to study the implications of other RTKs, besides IR, for both the diseases, (b) the unique role of Grb2 and NOX4 in the management of cytoskeleton degradation under AD/T2D conditions and (c) most importantly, the emergence of PAX4 as the first Transcription Factor that actively regulates the pathways of both AD and T2D.

## Data Availability

There are no large data sets associated with this manuscript. Reagents described in this study available on reasonable request.

## Competing Interests

The authors declare that there are no competing interests associated with the manuscript.

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## CRediT Author Contribution

**Debashis Mukhopadhyay:** Conceptualization, Resources, Formal analysis, Supervision, Funding acquisition, Validation, Investigation, Visualization, Project administration, Writing — review and editing. **Piyali Majumder:** Conceptualization, Data curation, Software, Formal analysis, Investigation, Methodology, Writing — original draft, Writing — review and editing. **Kaushik Chanda:** Data curation, Methodology. **Debjayoti Das:** Data curation, Methodology. **Brijesh Kumar Singh:** Methodology. **Partha Chakrabarti:** Resources, Data curation, Methodology. **Nihar Ranjan Jana:** Resources, Methodology.

## Abbreviations

AD, Alzheimer's Disease; ALK, anaplastic lymphoma kinase; APP, amyloid precursor protein; ARX, Aristaless Related Homeobox; IR, insulin receptor; PAX4, Paired Box Protein 4; ROS, reactive oxygen species; RTK, receptor tyrosine kinase; RYK, Receptor-like Tyrosine Kinase; SMA, smooth muscle actin; SSH-1, Slingshot homolog-1; TF, transcription factors.

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## Supplementary Information 1



**There are 1006 predicted targets for hsa-miR-1271-5p in miRDB.**

Target Detail	Target Rank	Target Score	miRNA Name	Gene Symbol	Gene Description
<a href="#">Details</a>	1	100	hsa-miR-1271-5p	<a href="#">ADCY6</a>	adenylate cyclase 6
<a href="#">Details</a>	2	100	hsa-miR-1271-5p	<a href="#">LRCH2</a>	leucine rich repeats and calponin homology domain containing 2
<a href="#">Details</a>	3	100	hsa-miR-1271-5p	<a href="#">NEXMIF</a>	neurite extension and migration factor
<a href="#">Details</a>	4	100	hsa-miR-1271-5p	<a href="#">PRTG</a>	protogenin
<a href="#">Details</a>	5	100	hsa-miR-1271-5p	<a href="#">SPIN1</a>	spindlin 1
<a href="#">Details</a>	6	100	hsa-miR-1271-5p	<a href="#">PLPPR4</a>	phospholipid phosphatase related 4
<a href="#">Details</a>	7	100	hsa-miR-1271-5p	<a href="#">FRS2</a>	fibroblast growth factor receptor substrate 2
<a href="#">Details</a>	8	100	hsa-miR-1271-5p	<a href="#">HAS2</a>	hyaluronan synthase 2
<a href="#">Details</a>	9	99	hsa-miR-1271-5p	<a href="#">SH3BP5</a>	SH3 domain binding protein 5
<a href="#">Details</a>	10	99	hsa-miR-1271-5p	<a href="#">ATXN1</a>	ataxin 1
<a href="#">Details</a>	11	99	hsa-miR-1271-5p	<a href="#">OXSR1</a>	oxidative stress responsive kinase 1
<a href="#">Details</a>	12	99	hsa-miR-1271-5p	<a href="#">SLC1A1</a>	solute carrier family 1 member 1
<a href="#">Details</a>	13	99	hsa-miR-1271-5p	<a href="#">UBE2G1</a>	ubiquitin conjugating enzyme E2 G1
<a href="#">Details</a>	14	99	hsa-miR-1271-5p	<a href="#">BRPF3</a>	bromodomain and PHD finger containing 3
<a href="#">Details</a>	15	99	hsa-miR-1271-5p	<a href="#">ITPR1</a>	inositol 1,4,5-trisphosphate receptor type 1
<a href="#">Details</a>	16	98	hsa-miR-1271-5p	<a href="#">HOOK3</a>	hook microtubule tethering protein 3
<a href="#">Details</a>	17	98	hsa-miR-1271-5p	<a href="#">KLHL34</a>	kelch like family member 34
<a href="#">Details</a>	18	98	hsa-miR-1271-5p	<a href="#">PHIP</a>	pleckstrin homology domain interacting protein
<a href="#">Details</a>	19	98	hsa-miR-1271-5p	<a href="#">MTSS1</a>	MTSS1, I-BAR domain containing
<a href="#">Details</a>	20	98	hsa-miR-1271-5p	<a href="#">E2F5</a>	E2F transcription factor 5
<a href="#">Details</a>	21	98	hsa-miR-1271-5p	<a href="#">MED1</a>	mediator complex subunit 1
<a href="#">Details</a>	22	98	hsa-miR-1271-5p	<a href="#">JMJD1C</a>	jumonji domain containing 1C
<a href="#">Details</a>	23	98	hsa-miR-1271-5p	<a href="#">SNX30</a>	sorting nexin family member 30
<a href="#">Details</a>	24	98	hsa-miR-1271-5p	<a href="#">PHF20L1</a>	PHD finger protein 20 like 1
<a href="#">Details</a>	25	98	hsa-miR-1271-5p	<a href="#">TBR1</a>	T-box, brain 1
<a href="#">Details</a>	26	98	hsa-miR-1271-5p	<a href="#">CTTN</a>	cortactin
<a href="#">Details</a>	27	98	hsa-miR-1271-5p	<a href="#">COL25A1</a>	collagen type XXV alpha 1 chain
<a href="#">Details</a>	28	98	hsa-miR-1271-5p	<a href="#">SOX6</a>	SRY-box 6
<a href="#">Details</a>	29	97	hsa-miR-1271-5p	<a href="#">B4GALNT1</a>	beta-1,4-N-acetyl-galactosaminyltransferase 1
<a href="#">Details</a>	30	97	hsa-miR-1271-5p	<a href="#">VAMP3</a>	vesicle associated membrane protein 3
<a href="#">Details</a>	31	97	hsa-miR-1271-5p	<a href="#">ZEB1</a>	zinc finger E-box binding homeobox 1
<a href="#">Details</a>	32	97	hsa-miR-1271-5p	<a href="#">MTOR</a>	mechanistic target of rapamycin kinase
<a href="#">Details</a>	33	97	hsa-miR-1271-5p	<a href="#">ZFP36L1</a>	ZFP36 ring finger protein like 1
<a href="#">Details</a>	34	97	hsa-miR-1271-5p	<a href="#">SIN3B</a>	SIN3 transcription regulator family member B
<a href="#">Details</a>	35	97	hsa-miR-1271-5p	<a href="#">CHST1</a>	carbohydrate sulfotransferase 1
<a href="#">Details</a>	36	97	hsa-miR-1271-5p	<a href="#">SESN3</a>	sestrin 3
<a href="#">Details</a>	37	97	hsa-miR-1271-5p	<a href="#">SLAIN2</a>	SLAIN motif family member 2
<a href="#">Details</a>	38	97	hsa-miR-1271-5p	<a href="#">RAB8B</a>	RAB8B, member RAS oncogene family
<a href="#">Details</a>	39	96	hsa-miR-1271-5p	<a href="#">TTYH3</a>	tweety family member 3
<a href="#">Details</a>	40	96	hsa-miR-1271-5p	<a href="#">ZCCHC3</a>	zinc finger CCHC-type containing 3

<a href="#">Details</a>	41	96	hsa-miR-1271-5p	<a href="#">PALLD</a>	palladin, cytoskeletal associated protein
<a href="#">Details</a>	42	96	hsa-miR-1271-5p	<a href="#">ARHGAP6</a>	Rho GTPase activating protein 6
<a href="#">Details</a>	43	96	hsa-miR-1271-5p	<a href="#">FOXF2</a>	forkhead box F2
<a href="#">Details</a>	44	96	hsa-miR-1271-5p	<a href="#">ATXN3</a>	ataxin 3
<a href="#">Details</a>	45	96	hsa-miR-1271-5p	<a href="#">ZBTB41</a>	zinc finger and BTB domain containing 41
<a href="#">Details</a>	46	96	hsa-miR-1271-5p	<a href="#">FRMD5</a>	FERM domain containing 5
<a href="#">Details</a>	47	96	hsa-miR-1271-5p	<a href="#">ANKRD27</a>	ankyrin repeat domain 27
<a href="#">Details</a>	48	96	hsa-miR-1271-5p	<a href="#">PRKCE</a>	protein kinase C epsilon
<a href="#">Details</a>	49	96	hsa-miR-1271-5p	<a href="#">SH3KBP1</a>	SH3 domain containing kinase binding protein 1
<a href="#">Details</a>	50	96	hsa-miR-1271-5p	<a href="#">PPP4R3A</a>	protein phosphatase 4 regulatory subunit 3A
<a href="#">Details</a>	51	96	hsa-miR-1271-5p	<a href="#">UNC13C</a>	unc-13 homolog C
<a href="#">Details</a>	52	96	hsa-miR-1271-5p	<a href="#">SPEN</a>	spen family transcriptional repressor
<a href="#">Details</a>	53	96	hsa-miR-1271-5p	<a href="#">TMEM170B</a>	transmembrane protein 170B
<a href="#">Details</a>	54	96	hsa-miR-1271-5p	<a href="#">TMEM198</a>	transmembrane protein 198
<a href="#">Details</a>	55	96	hsa-miR-1271-5p	<a href="#">NLGN2</a>	neuroligin 2
<a href="#">Details</a>	56	96	hsa-miR-1271-5p	<a href="#">MYRIP</a>	myosin VIIA and Rab interacting protein
<a href="#">Details</a>	57	96	hsa-miR-1271-5p	<a href="#">PPM1L</a>	protein phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> dependent 1L
<a href="#">Details</a>	58	96	hsa-miR-1271-5p	<a href="#">SLC39A1</a>	solute carrier family 39 member 1
<a href="#">Details</a>	59	95	hsa-miR-1271-5p	<a href="#">PRRG3</a>	proline rich and Gla domain 3
<a href="#">Details</a>	60	95	hsa-miR-1271-5p	<a href="#">WIPI2</a>	WD repeat domain, phosphoinositide interacting 2
<a href="#">Details</a>	61	95	hsa-miR-1271-5p	<a href="#">CACNA2D2</a>	calcium voltage-gated channel auxiliary subunit alpha2delta 2
<a href="#">Details</a>	62	95	hsa-miR-1271-5p	<a href="#">VAT1L</a>	vesicle amine transport 1 like
<a href="#">Details</a>	63	95	hsa-miR-1271-5p	<a href="#">CDH20</a>	cadherin 20
<a href="#">Details</a>	64	95	hsa-miR-1271-5p	<a href="#">SPRY3</a>	sprouty RTK signaling antagonist 3
<a href="#">Details</a>	65	95	hsa-miR-1271-5p	<a href="#">REV1</a>	REV1, DNA directed polymerase
<a href="#">Details</a>	66	95	hsa-miR-1271-5p	<a href="#">NRN1</a>	neuritin 1
<a href="#">Details</a>	67	95	hsa-miR-1271-5p	<a href="#">MIGA1</a>	mitoguardin 1
<a href="#">Details</a>	68	95	hsa-miR-1271-5p	<a href="#">STK19</a>	serine/threonine kinase 19
<a href="#">Details</a>	69	95	hsa-miR-1271-5p	<a href="#">FOXO1</a>	forkhead box O1
<a href="#">Details</a>	70	95	hsa-miR-1271-5p	<a href="#">TNS3</a>	tensin 3
<a href="#">Details</a>	71	95	hsa-miR-1271-5p	<a href="#">RASSF8</a>	Ras association domain family member 8
<a href="#">Details</a>	72	95	hsa-miR-1271-5p	<a href="#">SLC22A5</a>	solute carrier family 22 member 5
<a href="#">Details</a>	73	95	hsa-miR-1271-5p	<a href="#">CEP170B</a>	centrosomal protein 170B
<a href="#">Details</a>	74	95	hsa-miR-1271-5p	<a href="#">FOXQ1</a>	forkhead box Q1
<a href="#">Details</a>	75	95	hsa-miR-1271-5p	<a href="#">DOCK1</a>	dedicator of cytokinesis 1
<a href="#">Details</a>	76	95	hsa-miR-1271-5p	<a href="#">PHYHIPL</a>	phytanoyl-CoA 2-hydroxylase interacting protein like
<a href="#">Details</a>	77	94	hsa-miR-1271-5p	<a href="#">GPR22</a>	G protein-coupled receptor 22
<a href="#">Details</a>	78	94	hsa-miR-1271-5p	<a href="#">NTN4</a>	netrin 4
<a href="#">Details</a>	79	94	hsa-miR-1271-5p	<a href="#">ADK</a>	adenosine kinase
<a href="#">Details</a>	80	94	hsa-miR-1271-5p	<a href="#">TAF4B</a>	TATA-box binding protein associated factor 4b
<a href="#">Details</a>	81	94	hsa-miR-1271-5p	<a href="#">SLC39A9</a>	solute carrier family 39 member 9
<a href="#">Details</a>	82	94	hsa-miR-1271-5p	<a href="#">RAB3C</a>	RAB3C, member RAS oncogene family
<a href="#">Details</a>	83	94	hsa-miR-1271-5p	<a href="#">DEPTOR</a>	DEP domain containing MTOR interacting protein
<a href="#">Details</a>	84	94	hsa-miR-1271-5p	<a href="#">SPAST</a>	spastin
<a href="#">Details</a>	85	94	hsa-miR-1271-5p	<a href="#">BNC2</a>	basonuclin 2
<a href="#">Details</a>	86	94	hsa-miR-1271-5p	<a href="#">SLC12A6</a>	solute carrier family 12 member 6

<a href="#">Details</a>	87	94	hsa-miR-1271-5p	<a href="#">MSN</a>	moesin
<a href="#">Details</a>	88	94	hsa-miR-1271-5p	<a href="#">YIPF4</a>	Yip1 domain family member 4
<a href="#">Details</a>	89	94	hsa-miR-1271-5p	<a href="#">RPS6KA6</a>	ribosomal protein S6 kinase A6
<a href="#">Details</a>	90	94	hsa-miR-1271-5p	<a href="#">FAM49B</a>	family with sequence similarity 49 member B
<a href="#">Details</a>	91	94	hsa-miR-1271-5p	<a href="#">SLC16A9</a>	solute carrier family 16 member 9
<a href="#">Details</a>	92	94	hsa-miR-1271-5p	<a href="#">STAG1</a>	stromal antigen 1
<a href="#">Details</a>	93	94	hsa-miR-1271-5p	<a href="#">NOVA2</a>	NOVA alternative splicing regulator 2
<a href="#">Details</a>	94	94	hsa-miR-1271-5p	<a href="#">ZHX1</a>	zinc fingers and homeoboxes 1
<a href="#">Details</a>	95	94	hsa-miR-1271-5p	<a href="#">NCALD</a>	neurocalcin delta
<a href="#">Details</a>	96	93	hsa-miR-1271-5p	<a href="#">EPAS1</a>	endothelial PAS domain protein 1
<a href="#">Details</a>	97	93	hsa-miR-1271-5p	<a href="#">SLC33A1</a>	solute carrier family 33 member 1
<a href="#">Details</a>	98	93	hsa-miR-1271-5p	<a href="#">ABCA2</a>	ATP binding cassette subfamily A member 2
<a href="#">Details</a>	99	93	hsa-miR-1271-5p	<a href="#">DEUP1</a>	deuterosome assembly protein 1
<a href="#">Details</a>	100	93	hsa-miR-1271-5p	<a href="#">CHST10</a>	carbohydrate sulfotransferase 10
<a href="#">Details</a>	101	93	hsa-miR-1271-5p	<a href="#">CNNM3</a>	cyclin and CBS domain divalent metal cation transport mediator 3
<a href="#">Details</a>	102	93	hsa-miR-1271-5p	<a href="#">TAC1</a>	tachykinin precursor 1
<a href="#">Details</a>	103	93	hsa-miR-1271-5p	<a href="#">MTHFD2L</a>	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2 like
<a href="#">Details</a>	104	93	hsa-miR-1271-5p	<a href="#">RICTOR</a>	RPTOR independent companion of MTOR complex 2
<a href="#">Details</a>	105	93	hsa-miR-1271-5p	<a href="#">CHIC1</a>	cysteine rich hydrophobic domain 1
<a href="#">Details</a>	106	93	hsa-miR-1271-5p	<a href="#">PRRT3</a>	proline rich transmembrane protein 3
<a href="#">Details</a>	107	93	hsa-miR-1271-5p	<a href="#">KLHL7</a>	kelch like family member 7
<a href="#">Details</a>	108	93	hsa-miR-1271-5p	<a href="#">RGS17</a>	regulator of G protein signaling 17
<a href="#">Details</a>	109	93	hsa-miR-1271-5p	<a href="#">OVOL1</a>	ovo like transcriptional repressor 1
<a href="#">Details</a>	110	93	hsa-miR-1271-5p	<a href="#">TRIM9</a>	tripartite motif containing 9
<a href="#">Details</a>	111	93	hsa-miR-1271-5p	<a href="#">APPL1</a>	adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1
<a href="#">Details</a>	112	93	hsa-miR-1271-5p	<a href="#">PURA</a>	purine rich element binding protein A
<a href="#">Details</a>	113	93	hsa-miR-1271-5p	<a href="#">PDE8B</a>	phosphodiesterase 8B
<a href="#">Details</a>	114	93	hsa-miR-1271-5p	<a href="#">RALGPS1</a>	Ral GEF with PH domain and SH3 binding motif 1
<a href="#">Details</a>	115	93	hsa-miR-1271-5p	<a href="#">CD164</a>	CD164 molecule
<a href="#">Details</a>	116	93	hsa-miR-1271-5p	<a href="#">PLOD2</a>	procollagen-lysine,2-oxoglutarate 5-dioxygenase 2
<a href="#">Details</a>	117	93	hsa-miR-1271-5p	<a href="#">VAT1</a>	vesicle amine transport 1
<a href="#">Details</a>	118	93	hsa-miR-1271-5p	<a href="#">PRDM16</a>	PR/SET domain 16
<a href="#">Details</a>	119	93	hsa-miR-1271-5p	<a href="#">RNF139</a>	ring finger protein 139
<a href="#">Details</a>	120	93	hsa-miR-1271-5p	<a href="#">PLCB4</a>	phospholipase C beta 4
<a href="#">Details</a>	121	93	hsa-miR-1271-5p	<a href="#">CRYGS</a>	crystallin gamma S
<a href="#">Details</a>	122	92	hsa-miR-1271-5p	<a href="#">TUT4</a>	terminal uridylyl transferase 4
<a href="#">Details</a>	123	92	hsa-miR-1271-5p	<a href="#">ZFHX4</a>	zinc finger homeobox 4
<a href="#">Details</a>	124	92	hsa-miR-1271-5p	<a href="#">CADM2</a>	cell adhesion molecule 2
<a href="#">Details</a>	125	92	hsa-miR-1271-5p	<a href="#">PTPMT1</a>	protein tyrosine phosphatase, mitochondrial 1
<a href="#">Details</a>	126	92	hsa-miR-1271-5p	<a href="#">MROH2A</a>	maestro heat like repeat family member 2A
<a href="#">Details</a>	127	92	hsa-miR-1271-5p	<a href="#">ZFAND5</a>	zinc finger AN1-type containing 5
<a href="#">Details</a>	128	92	hsa-miR-1271-5p	<a href="#">BRWD3</a>	bromodomain and WD repeat domain containing 3
<a href="#">Details</a>	129	92	hsa-miR-1271-5p	<a href="#">EBF3</a>	EBF transcription factor 3
<a href="#">Details</a>	130	92	hsa-miR-1271-5p	<a href="#">CBFA2T3</a>	CBFA2/RUNX1 translocation partner 3
<a href="#">Details</a>	131	92	hsa-miR-1271-5p	<a href="#">ZFC3H1</a>	zinc finger C3H1-type containing

<a href="#">Details</a>	132	92	hsa-miR-1271-5p	<a href="#">SLC12A5</a>	solute carrier family 12 member 5
<a href="#">Details</a>	133	92	hsa-miR-1271-5p	<a href="#">LRIG1</a>	leucine rich repeats and immunoglobulin like domains 1
<a href="#">Details</a>	134	92	hsa-miR-1271-5p	<a href="#">FAM171A1</a>	family with sequence similarity 171 member A1
<a href="#">Details</a>	135	92	hsa-miR-1271-5p	<a href="#">ZNF704</a>	zinc finger protein 704
<a href="#">Details</a>	136	92	hsa-miR-1271-5p	<a href="#">MORF4L2</a>	mortality factor 4 like 2
<a href="#">Details</a>	137	92	hsa-miR-1271-5p	<a href="#">CACNB4</a>	calcium voltage-gated channel auxiliary subunit beta 4
<a href="#">Details</a>	138	92	hsa-miR-1271-5p	<a href="#">MAP3K3</a>	mitogen-activated protein kinase kinase 3
<a href="#">Details</a>	139	92	hsa-miR-1271-5p	<a href="#">PYGO2</a>	pygopus family PHD finger 2
<a href="#">Details</a>	140	92	hsa-miR-1271-5p	<a href="#">CERS2</a>	ceramide synthase 2
<a href="#">Details</a>	141	91	hsa-miR-1271-5p	<a href="#">RAPGEF4</a>	Rap guanine nucleotide exchange factor 4
<a href="#">Details</a>	142	91	hsa-miR-1271-5p	<a href="#">STMND1</a>	stathmin domain containing 1
<a href="#">Details</a>	143	91	hsa-miR-1271-5p	<a href="#">BICRAL</a>	BRD4 interacting chromatin remodeling complex associated protein like
<a href="#">Details</a>	144	91	hsa-miR-1271-5p	<a href="#">GIT2</a>	GIT ArfGAP 2
<a href="#">Details</a>	145	91	hsa-miR-1271-5p	<a href="#">MFAP3L</a>	microfibril associated protein 3 like
<a href="#">Details</a>	146	91	hsa-miR-1271-5p	<a href="#">HBEGF</a>	heparin binding EGF like growth factor
<a href="#">Details</a>	147	91	hsa-miR-1271-5p	<a href="#">CNOT6L</a>	CCR4-NOT transcription complex subunit 6 like
<a href="#">Details</a>	148	91	hsa-miR-1271-5p	<a href="#">SDC2</a>	syndecan 2
<a href="#">Details</a>	149	91	hsa-miR-1271-5p	<a href="#">PRKAR1A</a>	protein kinase cAMP-dependent type I regulatory subunit alpha
<a href="#">Details</a>	150	91	hsa-miR-1271-5p	<a href="#">RELL1</a>	RELT like 1
<a href="#">Details</a>	151	91	hsa-miR-1271-5p	<a href="#">EOMES</a>	eomesodermin
<a href="#">Details</a>	152	91	hsa-miR-1271-5p	<a href="#">AGO4</a>	argonaute RISC catalytic component 4
<a href="#">Details</a>	153	91	hsa-miR-1271-5p	<a href="#">ADGRB3</a>	adhesion G protein-coupled receptor B3
<a href="#">Details</a>	154	91	hsa-miR-1271-5p	<a href="#">PPIL1</a>	peptidylprolyl isomerase like 1
<a href="#">Details</a>	155	91	hsa-miR-1271-5p	<a href="#">ARPC5L</a>	actin related protein 2/3 complex subunit 5 like
<a href="#">Details</a>	156	91	hsa-miR-1271-5p	<a href="#">LRRC7</a>	leucine rich repeat containing 7
<a href="#">Details</a>	157	91	hsa-miR-1271-5p	<a href="#">MCMBP</a>	minichromosome maintenance complex binding protein
<a href="#">Details</a>	158	91	hsa-miR-1271-5p	<a href="#">ARHGEF3</a>	Rho guanine nucleotide exchange factor 3
<a href="#">Details</a>	159	91	hsa-miR-1271-5p	<a href="#">ALK</a>	ALK receptor tyrosine kinase
<a href="#">Details</a>	160	91	hsa-miR-1271-5p	<a href="#">GBP5</a>	guanylate binding protein 5
<a href="#">Details</a>	161	91	hsa-miR-1271-5p	<a href="#">YWHAG</a>	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein gamma
<a href="#">Details</a>	162	91	hsa-miR-1271-5p	<a href="#">ANKIB1</a>	ankyrin repeat and IBR domain containing 1
<a href="#">Details</a>	163	91	hsa-miR-1271-5p	<a href="#">KPNB1</a>	karyopherin subunit beta 1
<a href="#">Details</a>	164	90	hsa-miR-1271-5p	<a href="#">TARBP1</a>	TAR (HIV-1) RNA binding protein 1
<a href="#">Details</a>	165	90	hsa-miR-1271-5p	<a href="#">RAB27A</a>	RAB27A, member RAS oncogene family
<a href="#">Details</a>	166	90	hsa-miR-1271-5p	<a href="#">DCUN1D1</a>	defective in cullin neddylation 1 domain containing 1
<a href="#">Details</a>	167	90	hsa-miR-1271-5p	<a href="#">MAK</a>	male germ cell associated kinase
<a href="#">Details</a>	168	90	hsa-miR-1271-5p	<a href="#">BRMS1L</a>	BRMS1 like transcriptional repressor
<a href="#">Details</a>	169	90	hsa-miR-1271-5p	<a href="#">PIK3C2A</a>	phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 alpha
<a href="#">Details</a>	170	90	hsa-miR-1271-5p	<a href="#">RGPD1</a>	RANBP2-like and GRIP domain containing 1
<a href="#">Details</a>	171	90	hsa-miR-1271-5p	<a href="#">STX5</a>	syntaxin 5
<a href="#">Details</a>	172	90	hsa-miR-1271-5p	<a href="#">FNDC3B</a>	fibronectin type III domain containing 3B

<a href="#">Details</a>	173	90	hsa-miR-1271-5p	<a href="#">WDR82</a>	WD repeat domain 82
<a href="#">Details</a>	174	90	hsa-miR-1271-5p	<a href="#">LGI1</a>	leucine rich glioma inactivated 1
<a href="#">Details</a>	175	90	hsa-miR-1271-5p	<a href="#">FYCO1</a>	FYVE and coiled-coil domain containing 1
<a href="#">Details</a>	176	90	hsa-miR-1271-5p	<a href="#">PPP3R1</a>	protein phosphatase 3 regulatory subunit B, alpha
<a href="#">Details</a>	177	90	hsa-miR-1271-5p	<a href="#">L1CAM</a>	L1 cell adhesion molecule
<a href="#">Details</a>	178	90	hsa-miR-1271-5p	<a href="#">SCML4</a>	Scm polycomb group protein like 4
<a href="#">Details</a>	179	90	hsa-miR-1271-5p	<a href="#">EPHA3</a>	EPH receptor A3
<a href="#">Details</a>	180	89	hsa-miR-1271-5p	<a href="#">GALNT2</a>	polypeptide N-acetylgalactosaminyltransferase 2
<a href="#">Details</a>	181	89	hsa-miR-1271-5p	<a href="#">C20orf194</a>	chromosome 20 open reading frame 194
<a href="#">Details</a>	182	89	hsa-miR-1271-5p	<a href="#">RARG</a>	retinoic acid receptor gamma
<a href="#">Details</a>	183	89	hsa-miR-1271-5p	<a href="#">C5orf22</a>	chromosome 5 open reading frame 22
<a href="#">Details</a>	184	89	hsa-miR-1271-5p	<a href="#">B3GNT2</a>	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 2
<a href="#">Details</a>	185	89	hsa-miR-1271-5p	<a href="#">SERINC5</a>	serine incorporator 5
<a href="#">Details</a>	186	89	hsa-miR-1271-5p	<a href="#">FARP1</a>	FERM, ARH/RhoGEF and pleckstrin domain protein 1
<a href="#">Details</a>	187	89	hsa-miR-1271-5p	<a href="#">ABCD1</a>	ATP binding cassette subfamily D member 1
<a href="#">Details</a>	188	89	hsa-miR-1271-5p	<a href="#">PPM1F</a>	protein phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> dependent 1F
<a href="#">Details</a>	189	89	hsa-miR-1271-5p	<a href="#">PAFAH1B1</a>	platelet activating factor acetylhydrolase 1b regulatory subunit 1
<a href="#">Details</a>	190	89	hsa-miR-1271-5p	<a href="#">DCUN1D3</a>	defective in cullin neddylation 1 domain containing 3
<a href="#">Details</a>	191	89	hsa-miR-1271-5p	<a href="#">GLE1</a>	GLE1, RNA export mediator
<a href="#">Details</a>	192	89	hsa-miR-1271-5p	<a href="#">TCF7L2</a>	transcription factor 7 like 2
<a href="#">Details</a>	193	89	hsa-miR-1271-5p	<a href="#">RGS2</a>	regulator of G protein signaling 2
<a href="#">Details</a>	194	89	hsa-miR-1271-5p	<a href="#">LPP</a>	LIM domain containing preferred translocation partner in lipoma
<a href="#">Details</a>	195	89	hsa-miR-1271-5p	<a href="#">AK3</a>	adenylyl kinase 3
<a href="#">Details</a>	196	89	hsa-miR-1271-5p	<a href="#">SINHCAF</a>	SIN3-HDAC complex associated factor
<a href="#">Details</a>	197	89	hsa-miR-1271-5p	<a href="#">PTGER3</a>	prostaglandin E receptor 3
<a href="#">Details</a>	198	89	hsa-miR-1271-5p	<a href="#">FN1</a>	fibronectin 1
<a href="#">Details</a>	199	89	hsa-miR-1271-5p	<a href="#">ERG</a>	ETS transcription factor ERG
<a href="#">Details</a>	200	89	hsa-miR-1271-5p	<a href="#">CELSR2</a>	cadherin EGF LAG seven-pass G-type receptor 2
<a href="#">Details</a>	201	89	hsa-miR-1271-5p	<a href="#">TRIB3</a>	tribbles pseudokinase 3
<a href="#">Details</a>	202	88	hsa-miR-1271-5p	<a href="#">PNPLA1</a>	patatin like phospholipase domain containing 1
<a href="#">Details</a>	203	88	hsa-miR-1271-5p	<a href="#">DAAM1</a>	dishevelled associated activator of morphogenesis 1
<a href="#">Details</a>	204	88	hsa-miR-1271-5p	<a href="#">OR10W1</a>	olfactory receptor family 10 subfamily W member 1
<a href="#">Details</a>	205	88	hsa-miR-1271-5p	<a href="#">ACTRT3</a>	actin related protein T3
<a href="#">Details</a>	206	88	hsa-miR-1271-5p	<a href="#">XKR4</a>	XK related 4
<a href="#">Details</a>	207	88	hsa-miR-1271-5p	<a href="#">AZIN1</a>	antizyme inhibitor 1
<a href="#">Details</a>	208	88	hsa-miR-1271-5p	<a href="#">STK17A</a>	serine/threonine kinase 17a
<a href="#">Details</a>	209	88	hsa-miR-1271-5p	<a href="#">FGF9</a>	fibroblast growth factor 9
<a href="#">Details</a>	210	88	hsa-miR-1271-5p	<a href="#">AJAP1</a>	adherens junctions associated protein 1
<a href="#">Details</a>	211	88	hsa-miR-1271-5p	<a href="#">ATP2B4</a>	ATPase plasma membrane Ca <sup>2+</sup> transporting 4
<a href="#">Details</a>	212	88	hsa-miR-1271-5p	<a href="#">DMXL1</a>	Dmx like 1

<a href="#">Details</a>	213	88	hsa-miR-1271-5p	<a href="#">STK17B</a>	serine/threonine kinase 17b
<a href="#">Details</a>	214	88	hsa-miR-1271-5p	<a href="#">ARPP19</a>	cAMP regulated phosphoprotein 19
<a href="#">Details</a>	215	88	hsa-miR-1271-5p	<a href="#">OGT</a>	O-linked N-acetylglucosamine (GlcNAc) transferase
<a href="#">Details</a>	216	88	hsa-miR-1271-5p	<a href="#">PRIMA1</a>	proline rich membrane anchor 1
<a href="#">Details</a>	217	88	hsa-miR-1271-5p	<a href="#">LMTK3</a>	lemur tyrosine kinase 3
<a href="#">Details</a>	218	88	hsa-miR-1271-5p	<a href="#">SNX16</a>	sorting nexin 16
<a href="#">Details</a>	219	88	hsa-miR-1271-5p	<a href="#">BRINP2</a>	BMP/retinoic acid inducible neural specific 2
<a href="#">Details</a>	220	88	hsa-miR-1271-5p	<a href="#">PHACTR4</a>	phosphatase and actin regulator 4
<a href="#">Details</a>	221	88	hsa-miR-1271-5p	<a href="#">PCGF5</a>	polycomb group ring finger 5
<a href="#">Details</a>	222	88	hsa-miR-1271-5p	<a href="#">QKI</a>	QKI, KH domain containing RNA binding
<a href="#">Details</a>	223	88	hsa-miR-1271-5p	<a href="#">GAP43</a>	growth associated protein 43
<a href="#">Details</a>	224	88	hsa-miR-1271-5p	<a href="#">CTDSP1</a>	CTD small phosphatase 1
<a href="#">Details</a>	225	88	hsa-miR-1271-5p	<a href="#">RWDD4</a>	RWD domain containing 4
<a href="#">Details</a>	226	88	hsa-miR-1271-5p	<a href="#">FEM1B</a>	fem-1 homolog B
<a href="#">Details</a>	227	88	hsa-miR-1271-5p	<a href="#">LAMC1</a>	laminin subunit gamma 1
<a href="#">Details</a>	228	88	hsa-miR-1271-5p	<a href="#">PRRX1</a>	paired related homeobox 1
<a href="#">Details</a>	229	88	hsa-miR-1271-5p	<a href="#">LILRA1</a>	leukocyte immunoglobulin like receptor A1
<a href="#">Details</a>	230	88	hsa-miR-1271-5p	<a href="#">GRB2</a>	growth factor receptor bound protein 2
<a href="#">Details</a>	231	87	hsa-miR-1271-5p	<a href="#">SEZ6L</a>	seizure related 6 homolog like
<a href="#">Details</a>	232	87	hsa-miR-1271-5p	<a href="#">GAN</a>	gigaxonin
<a href="#">Details</a>	233	87	hsa-miR-1271-5p	<a href="#">DDAH1</a>	dimethylarginine dimethylaminohydrolase 1
<a href="#">Details</a>	234	87	hsa-miR-1271-5p	<a href="#">NPTX2</a>	neuronal pentraxin 2
<a href="#">Details</a>	235	87	hsa-miR-1271-5p	<a href="#">KRAS</a>	KRAS proto-oncogene, GTPase
<a href="#">Details</a>	236	87	hsa-miR-1271-5p	<a href="#">AP3S1</a>	adaptor related protein complex 3 subunit sigma 1
<a href="#">Details</a>	237	87	hsa-miR-1271-5p	<a href="#">ZHX2</a>	zinc fingers and homeoboxes 2
<a href="#">Details</a>	238	87	hsa-miR-1271-5p	<a href="#">MORF4L1</a>	mortality factor 4 like 1
<a href="#">Details</a>	239	87	hsa-miR-1271-5p	<a href="#">C16orf70</a>	chromosome 16 open reading frame 70
<a href="#">Details</a>	240	87	hsa-miR-1271-5p	<a href="#">DOCK4</a>	dedicator of cytokinesis 4
<a href="#">Details</a>	241	87	hsa-miR-1271-5p	<a href="#">RITA1</a>	RBPJ interacting and tubulin associated 1
<a href="#">Details</a>	242	87	hsa-miR-1271-5p	<a href="#">NUS1</a>	NUS1, dehydrololichyl diphosphate synthase subunit
<a href="#">Details</a>	243	87	hsa-miR-1271-5p	<a href="#">ST6GALNAC3</a>	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 3
<a href="#">Details</a>	244	87	hsa-miR-1271-5p	<a href="#">PPP1R9B</a>	protein phosphatase 1 regulatory subunit 9B
<a href="#">Details</a>	245	87	hsa-miR-1271-5p	<a href="#">TOPORS</a>	TOP1 binding arginine/serine rich protein
<a href="#">Details</a>	246	87	hsa-miR-1271-5p	<a href="#">EXT1</a>	exostosin glycosyltransferase 1
<a href="#">Details</a>	247	87	hsa-miR-1271-5p	<a href="#">PAIP1</a>	poly(A) binding protein interacting protein 1
<a href="#">Details</a>	248	86	hsa-miR-1271-5p	<a href="#">ANXA11</a>	annexin A11
<a href="#">Details</a>	249	86	hsa-miR-1271-5p	<a href="#">NCKAP1</a>	NCK associated protein 1
<a href="#">Details</a>	250	86	hsa-miR-1271-5p	<a href="#">SV2C</a>	synaptic vesicle glycoprotein 2C
<a href="#">Details</a>	251	86	hsa-miR-1271-5p	<a href="#">SLC38A4</a>	solute carrier family 38 member 4
<a href="#">Details</a>	252	86	hsa-miR-1271-5p	<a href="#">USF3</a>	upstream transcription factor family member 3
<a href="#">Details</a>	253	86	hsa-miR-1271-5p	<a href="#">SLF2</a>	SMC5-SMC6 complex localization factor 2
<a href="#">Details</a>	254	86	hsa-miR-1271-5p	<a href="#">RAB10</a>	RAB10, member RAS oncogene family
<a href="#">Details</a>	255	86	hsa-miR-1271-5p	<a href="#">SLC24A4</a>	solute carrier family 24 member 4
<a href="#">Details</a>	256	86	hsa-miR-1271-5p	<a href="#">RALB</a>	RAS like proto-oncogene B
<a href="#">Details</a>	257	86	hsa-miR-1271-5p	<a href="#">PLAGL1</a>	PLAG1 like zinc finger 1
<a href="#">Details</a>	258	86	hsa-miR-1271-5p	<a href="#">KLHL4</a>	kelch like family member 4
<a href="#">Details</a>	259	86	hsa-miR-1271-5p	<a href="#">RUNDC3B</a>	RUN domain containing 3B

<a href="#">Details</a>	260	86	hsa-miR-1271-5p	<a href="#">CAV1</a>	caveolin 1
<a href="#">Details</a>	261	86	hsa-miR-1271-5p	<a href="#">SMAD1</a>	SMAD family member 1
<a href="#">Details</a>	262	86	hsa-miR-1271-5p	<a href="#">RAB23</a>	RAB23, member RAS oncogene family
<a href="#">Details</a>	263	86	hsa-miR-1271-5p	<a href="#">HOXA9</a>	homeobox A9
<a href="#">Details</a>	264	86	hsa-miR-1271-5p	<a href="#">MAST4</a>	microtubule associated serine/threonine kinase family member 4
<a href="#">Details</a>	265	86	hsa-miR-1271-5p	<a href="#">GDNF</a>	glial cell derived neurotrophic factor
<a href="#">Details</a>	266	86	hsa-miR-1271-5p	<a href="#">IRS1</a>	insulin receptor substrate 1
<a href="#">Details</a>	267	86	hsa-miR-1271-5p	<a href="#">ADGRL2</a>	adhesion G protein-coupled receptor L2
<a href="#">Details</a>	268	86	hsa-miR-1271-5p	<a href="#">NUDT13</a>	nudix hydrolase 13
<a href="#">Details</a>	269	86	hsa-miR-1271-5p	<a href="#">MAP3K2</a>	mitogen-activated protein kinase kinase 2
<a href="#">Details</a>	270	86	hsa-miR-1271-5p	<a href="#">KIAA0513</a>	KIAA0513
<a href="#">Details</a>	271	85	hsa-miR-1271-5p	<a href="#">KIAA1217</a>	KIAA1217
<a href="#">Details</a>	272	85	hsa-miR-1271-5p	<a href="#">LCP1</a>	lymphocyte cytosolic protein 1
<a href="#">Details</a>	273	85	hsa-miR-1271-5p	<a href="#">CNN3</a>	calponin 3
<a href="#">Details</a>	274	85	hsa-miR-1271-5p	<a href="#">BCL2L12</a>	BCL2 like 12
<a href="#">Details</a>	275	85	hsa-miR-1271-5p	<a href="#">ARHGEF12</a>	Rho guanine nucleotide exchange factor 12
<a href="#">Details</a>	276	85	hsa-miR-1271-5p	<a href="#">ST7</a>	suppression of tumorigenicity 7
<a href="#">Details</a>	277	85	hsa-miR-1271-5p	<a href="#">MRAS</a>	muscle RAS oncogene homolog
<a href="#">Details</a>	278	85	hsa-miR-1271-5p	<a href="#">PDZD8</a>	PDZ domain containing 8
<a href="#">Details</a>	279	85	hsa-miR-1271-5p	<a href="#">CPSF6</a>	cleavage and polyadenylation specific factor 6
<a href="#">Details</a>	280	85	hsa-miR-1271-5p	<a href="#">DLAT</a>	dihydrolipoamide S-acetyltransferase
<a href="#">Details</a>	281	85	hsa-miR-1271-5p	<a href="#">SORT1</a>	sortilin 1
<a href="#">Details</a>	282	85	hsa-miR-1271-5p	<a href="#">RAB2A</a>	RAB2A, member RAS oncogene family
<a href="#">Details</a>	283	85	hsa-miR-1271-5p	<a href="#">IGF1R</a>	insulin like growth factor 1 receptor
<a href="#">Details</a>	284	85	hsa-miR-1271-5p	<a href="#">SH3PXD2B</a>	SH3 and PX domains 2B
<a href="#">Details</a>	285	85	hsa-miR-1271-5p	<a href="#">CRKL</a>	CRK like proto-oncogene, adaptor protein
<a href="#">Details</a>	286	85	hsa-miR-1271-5p	<a href="#">SLC6A9</a>	solute carrier family 6 member 9
<a href="#">Details</a>	287	85	hsa-miR-1271-5p	<a href="#">PTP4A1</a>	protein tyrosine phosphatase type IVA, member 1
<a href="#">Details</a>	288	85	hsa-miR-1271-5p	<a href="#">SEPT9</a>	septin 9
<a href="#">Details</a>	289	85	hsa-miR-1271-5p	<a href="#">ZDHHC17</a>	zinc finger DHHC-type containing 17
<a href="#">Details</a>	290	85	hsa-miR-1271-5p	<a href="#">ERLIN1</a>	ER lipid raft associated 1
<a href="#">Details</a>	291	85	hsa-miR-1271-5p	<a href="#">TRIM46</a>	tripartite motif containing 46
<a href="#">Details</a>	292	85	hsa-miR-1271-5p	<a href="#">FOXO3</a>	forkhead box O3
<a href="#">Details</a>	293	84	hsa-miR-1271-5p	<a href="#">AQP2</a>	aquaporin 2
<a href="#">Details</a>	294	84	hsa-miR-1271-5p	<a href="#">FOXK2</a>	forkhead box K2
<a href="#">Details</a>	295	84	hsa-miR-1271-5p	<a href="#">NOVA1</a>	NOVA alternative splicing regulator 1
<a href="#">Details</a>	296	84	hsa-miR-1271-5p	<a href="#">CNTN1</a>	contactin 1
<a href="#">Details</a>	297	84	hsa-miR-1271-5p	<a href="#">MAP2K3</a>	mitogen-activated protein kinase kinase 3
<a href="#">Details</a>	298	84	hsa-miR-1271-5p	<a href="#">GXYLT1</a>	glucoside xylosyltransferase 1
<a href="#">Details</a>	299	84	hsa-miR-1271-5p	<a href="#">SLC18A3</a>	solute carrier family 18 member A3
<a href="#">Details</a>	300	84	hsa-miR-1271-5p	<a href="#">JPT2</a>	Jupiter microtubule associated homolog 2
<a href="#">Details</a>	301	84	hsa-miR-1271-5p	<a href="#">DPY19L3</a>	dpy-19 like C-mannosyltransferase 3
<a href="#">Details</a>	302	84	hsa-miR-1271-5p	<a href="#">ASH1L</a>	ASH1 like histone lysine methyltransferase
<a href="#">Details</a>	303	84	hsa-miR-1271-5p	<a href="#">MAGEL2</a>	MAGE family member L2
<a href="#">Details</a>	304	84	hsa-miR-1271-5p	<a href="#">MED14</a>	mediator complex subunit 14
<a href="#">Details</a>	305	84	hsa-miR-1271-5p	<a href="#">TOX</a>	thymocyte selection associated high mobility group box
<a href="#">Details</a>	306	84	hsa-miR-1271-5p	<a href="#">LRRC3</a>	leucine rich repeat containing 3
<a href="#">Details</a>	307	84	hsa-miR-1271-5p	<a href="#">KCNG3</a>	potassium voltage-gated channel modifier

					subfamily G member 3
<a href="#">Details</a>	308	84	hsa-miR-1271-5p	<a href="#">NANOS1</a>	nanos C2HC-type zinc finger 1
<a href="#">Details</a>	309	84	hsa-miR-1271-5p	<a href="#">EVI5</a>	ecotropic viral integration site 5
<a href="#">Details</a>	310	84	hsa-miR-1271-5p	<a href="#">MAP2K1</a>	mitogen-activated protein kinase kinase 1
<a href="#">Details</a>	311	84	hsa-miR-1271-5p	<a href="#">DPYD</a>	dihydropyrimidine dehydrogenase
<a href="#">Details</a>	312	84	hsa-miR-1271-5p	<a href="#">LMTK2</a>	lemur tyrosine kinase 2
<a href="#">Details</a>	313	84	hsa-miR-1271-5p	<a href="#">GPR135</a>	G protein-coupled receptor 135
<a href="#">Details</a>	314	84	hsa-miR-1271-5p	<a href="#">MFAP3</a>	microfibril associated protein 3
<a href="#">Details</a>	315	84	hsa-miR-1271-5p	<a href="#">DOCK9</a>	dedicator of cytokinesis 9
<a href="#">Details</a>	316	84	hsa-miR-1271-5p	<a href="#">MITF</a>	melanocyte inducing transcription factor
<a href="#">Details</a>	317	84	hsa-miR-1271-5p	<a href="#">SPAG8</a>	sperm associated antigen 8
<a href="#">Details</a>	318	84	hsa-miR-1271-5p	<a href="#">LNX2</a>	ligand of numb-protein X 2
<a href="#">Details</a>	319	83	hsa-miR-1271-5p	<a href="#">RBM20</a>	RNA binding motif protein 20
<a href="#">Details</a>	320	83	hsa-miR-1271-5p	<a href="#">CLN5</a>	CLN5, intracellular trafficking protein
<a href="#">Details</a>	321	83	hsa-miR-1271-5p	<a href="#">GPC3</a>	glypican 3
<a href="#">Details</a>	322	83	hsa-miR-1271-5p	<a href="#">EIF5</a>	eukaryotic translation initiation factor 5
<a href="#">Details</a>	323	83	hsa-miR-1271-5p	<a href="#">KCNK9</a>	potassium two pore domain channel subfamily K member 9
<a href="#">Details</a>	324	83	hsa-miR-1271-5p	<a href="#">PPP3CA</a>	protein phosphatase 3 catalytic subunit alpha
<a href="#">Details</a>	325	83	hsa-miR-1271-5p	<a href="#">IGF2BP1</a>	insulin like growth factor 2 mRNA binding protein 1
<a href="#">Details</a>	326	83	hsa-miR-1271-5p	<a href="#">DLEU7</a>	deleted in lymphocytic leukemia 7
<a href="#">Details</a>	327	83	hsa-miR-1271-5p	<a href="#">YES1</a>	YES proto-oncogene 1, Src family tyrosine kinase
<a href="#">Details</a>	328	83	hsa-miR-1271-5p	<a href="#">AHR</a>	aryl hydrocarbon receptor
<a href="#">Details</a>	329	83	hsa-miR-1271-5p	<a href="#">DHX8</a>	DEAH-box helicase 8
<a href="#">Details</a>	330	83	hsa-miR-1271-5p	<a href="#">SLC7A8</a>	solute carrier family 7 member 8
<a href="#">Details</a>	331	83	hsa-miR-1271-5p	<a href="#">POU2F2</a>	POU class 2 homeobox 2
<a href="#">Details</a>	332	83	hsa-miR-1271-5p	<a href="#">USP45</a>	ubiquitin specific peptidase 45
<a href="#">Details</a>	333	83	hsa-miR-1271-5p	<a href="#">GCNT1</a>	glucosaminyl (N-acetyl) transferase 1
<a href="#">Details</a>	334	83	hsa-miR-1271-5p	<a href="#">TAPT1</a>	transmembrane anterior posterior transformation 1
<a href="#">Details</a>	335	83	hsa-miR-1271-5p	<a href="#">PGAP1</a>	post-GPI attachment to proteins 1
<a href="#">Details</a>	336	83	hsa-miR-1271-5p	<a href="#">SCYL3</a>	SCY1 like pseudokinase 3
<a href="#">Details</a>	337	83	hsa-miR-1271-5p	<a href="#">EDEM1</a>	ER degradation enhancing alpha-mannosidase like protein 1
<a href="#">Details</a>	338	83	hsa-miR-1271-5p	<a href="#">LRRC4</a>	leucine rich repeat containing 4
<a href="#">Details</a>	339	83	hsa-miR-1271-5p	<a href="#">SERPINB2</a>	serpin family B member 2
<a href="#">Details</a>	340	83	hsa-miR-1271-5p	<a href="#">UCK2</a>	uridine-cytidine kinase 2
<a href="#">Details</a>	341	83	hsa-miR-1271-5p	<a href="#">SLC44A5</a>	solute carrier family 44 member 5
<a href="#">Details</a>	342	83	hsa-miR-1271-5p	<a href="#">SLC44A2</a>	solute carrier family 44 member 2
<a href="#">Details</a>	343	83	hsa-miR-1271-5p	<a href="#">CREB3L2</a>	cAMP responsive element binding protein 3 like 2
<a href="#">Details</a>	344	82	hsa-miR-1271-5p	<a href="#">SPSB1</a>	spla/ryanodine receptor domain and SOCS box containing 1
<a href="#">Details</a>	345	82	hsa-miR-1271-5p	<a href="#">ABHD13</a>	abhydrolase domain containing 13
<a href="#">Details</a>	346	82	hsa-miR-1271-5p	<a href="#">FKBP7</a>	FKBP prolyl isomerase 7
<a href="#">Details</a>	347	82	hsa-miR-1271-5p	<a href="#">SOX5</a>	SRY-box 5
<a href="#">Details</a>	348	82	hsa-miR-1271-5p	<a href="#">TMEM169</a>	transmembrane protein 169
<a href="#">Details</a>	349	82	hsa-miR-1271-5p	<a href="#">BCR</a>	BCR, RhoGEF and GTPase activating protein
<a href="#">Details</a>	350	82	hsa-miR-1271-5p	<a href="#">TPR</a>	translocated promoter region, nuclear basket protein
<a href="#">Details</a>	351	82	hsa-miR-1271-5p	<a href="#">RNF183</a>	ring finger protein 183

<a href="#">Details</a>	352	82	hsa-miR-1271-5p	<a href="#">COL13A1</a>	collagen type XIII alpha 1 chain
<a href="#">Details</a>	353	82	hsa-miR-1271-5p	<a href="#">OXGR1</a>	oxoglutarate receptor 1
<a href="#">Details</a>	354	82	hsa-miR-1271-5p	<a href="#">SOGA1</a>	suppressor of glucose, autophagy associated 1
<a href="#">Details</a>	355	82	hsa-miR-1271-5p	<a href="#">ADD3</a>	adducin 3
<a href="#">Details</a>	356	82	hsa-miR-1271-5p	<a href="#">RIOX1</a>	ribosomal oxygenase 1
<a href="#">Details</a>	357	82	hsa-miR-1271-5p	<a href="#">ATG9A</a>	autophagy related 9A
<a href="#">Details</a>	358	82	hsa-miR-1271-5p	<a href="#">EIF4EBP2</a>	eukaryotic translation initiation factor 4E binding protein 2
<a href="#">Details</a>	359	82	hsa-miR-1271-5p	<a href="#">REPS2</a>	RALBP1 associated Eps domain containing 2
<a href="#">Details</a>	360	82	hsa-miR-1271-5p	<a href="#">ELAVL4</a>	ELAV like RNA binding protein 4
<a href="#">Details</a>	361	81	hsa-miR-1271-5p	<a href="#">NEUROD4</a>	neuronal differentiation 4
<a href="#">Details</a>	362	81	hsa-miR-1271-5p	<a href="#">FAM43A</a>	family with sequence similarity 43 member A
<a href="#">Details</a>	363	81	hsa-miR-1271-5p	<a href="#">LHX1</a>	LIM homeobox 1
<a href="#">Details</a>	364	81	hsa-miR-1271-5p	<a href="#">EIF3J</a>	eukaryotic translation initiation factor 3 subunit J
<a href="#">Details</a>	365	81	hsa-miR-1271-5p	<a href="#">UBE2Q2</a>	ubiquitin conjugating enzyme E2 Q2
<a href="#">Details</a>	366	81	hsa-miR-1271-5p	<a href="#">ASTN1</a>	astrotactin 1
<a href="#">Details</a>	367	81	hsa-miR-1271-5p	<a href="#">ATG16L1</a>	autophagy related 16 like 1
<a href="#">Details</a>	368	81	hsa-miR-1271-5p	<a href="#">LRRC28</a>	leucine rich repeat containing 28
<a href="#">Details</a>	369	81	hsa-miR-1271-5p	<a href="#">MAP1B</a>	microtubule associated protein 1B
<a href="#">Details</a>	370	81	hsa-miR-1271-5p	<a href="#">AEBP2</a>	AE binding protein 2
<a href="#">Details</a>	371	81	hsa-miR-1271-5p	<a href="#">ERC2</a>	ELKS/RAB6-interacting/CAST family member 2
<a href="#">Details</a>	372	81	hsa-miR-1271-5p	<a href="#">MTDH</a>	metadherin
<a href="#">Details</a>	373	81	hsa-miR-1271-5p	<a href="#">TLL1</a>	tolloid like 1
<a href="#">Details</a>	374	81	hsa-miR-1271-5p	<a href="#">PAK1</a>	p21 (RAC1) activated kinase 1
<a href="#">Details</a>	375	81	hsa-miR-1271-5p	<a href="#">THBS2</a>	thrombospondin 2
<a href="#">Details</a>	376	81	hsa-miR-1271-5p	<a href="#">ITPR2</a>	inositol 1,4,5-trisphosphate receptor type 2
<a href="#">Details</a>	377	81	hsa-miR-1271-5p	<a href="#">BMPR1B</a>	bone morphogenetic protein receptor type 1B
<a href="#">Details</a>	378	81	hsa-miR-1271-5p	<a href="#">SLTRK4</a>	SLIT and NTRK like family member 4
<a href="#">Details</a>	379	81	hsa-miR-1271-5p	<a href="#">ELOVL5</a>	ELOVL fatty acid elongase 5
<a href="#">Details</a>	380	80	hsa-miR-1271-5p	<a href="#">SLC26A9</a>	solute carrier family 26 member 9
<a href="#">Details</a>	381	80	hsa-miR-1271-5p	<a href="#">GJC1</a>	gap junction protein gamma 1
<a href="#">Details</a>	382	80	hsa-miR-1271-5p	<a href="#">CORO1C</a>	coronin 1C
<a href="#">Details</a>	383	80	hsa-miR-1271-5p	<a href="#">PLEKHM1</a>	pleckstrin homology and RUN domain containing M1
<a href="#">Details</a>	384	80	hsa-miR-1271-5p	<a href="#">CASP2</a>	caspase 2
<a href="#">Details</a>	385	80	hsa-miR-1271-5p	<a href="#">SAR1B</a>	secretion associated Ras related GTPase 1B
<a href="#">Details</a>	386	80	hsa-miR-1271-5p	<a href="#">LUZP1</a>	leucine zipper protein 1
<a href="#">Details</a>	387	80	hsa-miR-1271-5p	<a href="#">ANKRD52</a>	ankyrin repeat domain 52
<a href="#">Details</a>	388	80	hsa-miR-1271-5p	<a href="#">OLFM1</a>	olfactomedin 1
<a href="#">Details</a>	389	80	hsa-miR-1271-5p	<a href="#">BNIP3</a>	BCL2 interacting protein 3
<a href="#">Details</a>	390	80	hsa-miR-1271-5p	<a href="#">PDZRN4</a>	PDZ domain containing ring finger 4
<a href="#">Details</a>	391	80	hsa-miR-1271-5p	<a href="#">FBXO41</a>	F-box protein 41
<a href="#">Details</a>	392	80	hsa-miR-1271-5p	<a href="#">HDAC7</a>	histone deacetylase 7
<a href="#">Details</a>	393	80	hsa-miR-1271-5p	<a href="#">PBX2</a>	PBX homeobox 2
<a href="#">Details</a>	394	80	hsa-miR-1271-5p	<a href="#">NEK7</a>	NIMA related kinase 7
<a href="#">Details</a>	395	80	hsa-miR-1271-5p	<a href="#">TRIO</a>	trio Rho guanine nucleotide exchange factor
<a href="#">Details</a>	396	80	hsa-miR-1271-5p	<a href="#">PIK3R1</a>	phosphoinositide-3-kinase regulatory subunit 1
<a href="#">Details</a>	397	80	hsa-miR-1271-5p	<a href="#">GRIA1</a>	glutamate ionotropic receptor AMPA type subunit 1

<a href="#">Details</a>	398	80	hsa-miR-1271-5p	<a href="#">RASA1</a>	RAS p21 protein activator 1
<a href="#">Details</a>	399	80	hsa-miR-1271-5p	<a href="#">ZCCHC14</a>	zinc finger CCHC-type containing 14
<a href="#">Details</a>	400	80	hsa-miR-1271-5p	<a href="#">PSME4</a>	proteasome activator subunit 4
<a href="#">Details</a>	401	80	hsa-miR-1271-5p	<a href="#">RAB35</a>	RAB35, member RAS oncogene family
<a href="#">Details</a>	402	80	hsa-miR-1271-5p	<a href="#">RFTN1</a>	raftlin, lipid raft linker 1
<a href="#">Details</a>	403	80	hsa-miR-1271-5p	<a href="#">TMEM52B</a>	transmembrane protein 52B
<a href="#">Details</a>	404	80	hsa-miR-1271-5p	<a href="#">USP5</a>	ubiquitin specific peptidase 5
<a href="#">Details</a>	405	80	hsa-miR-1271-5p	<a href="#">GNAI3</a>	G protein subunit alpha i3
<a href="#">Details</a>	406	80	hsa-miR-1271-5p	<a href="#">FZD3</a>	frizzled class receptor 3
<a href="#">Details</a>	407	80	hsa-miR-1271-5p	<a href="#">FAM216A</a>	family with sequence similarity 216 member A
<a href="#">Details</a>	408	80	hsa-miR-1271-5p	<a href="#">HSPA2</a>	heat shock protein family A (Hsp70) member 2
<a href="#">Details</a>	409	79	hsa-miR-1271-5p	<a href="#">RDH11</a>	retinol dehydrogenase 11
<a href="#">Details</a>	410	79	hsa-miR-1271-5p	<a href="#">CACNB1</a>	calcium voltage-gated channel auxiliary subunit beta 1
<a href="#">Details</a>	411	79	hsa-miR-1271-5p	<a href="#">CDK18</a>	cyclin dependent kinase 18
<a href="#">Details</a>	412	79	hsa-miR-1271-5p	<a href="#">DDHD1</a>	DDHD domain containing 1
<a href="#">Details</a>	413	79	hsa-miR-1271-5p	<a href="#">FOXO4</a>	forkhead box O4
<a href="#">Details</a>	414	79	hsa-miR-1271-5p	<a href="#">C2orf72</a>	chromosome 2 open reading frame 72
<a href="#">Details</a>	415	79	hsa-miR-1271-5p	<a href="#">ZNF850</a>	zinc finger protein 850
<a href="#">Details</a>	416	79	hsa-miR-1271-5p	<a href="#">DDIT3</a>	DNA damage inducible transcript 3
<a href="#">Details</a>	417	79	hsa-miR-1271-5p	<a href="#">SLC35A1</a>	solute carrier family 35 member A1
<a href="#">Details</a>	418	79	hsa-miR-1271-5p	<a href="#">SHC4</a>	SHC adaptor protein 4
<a href="#">Details</a>	419	79	hsa-miR-1271-5p	<a href="#">SYT16</a>	synaptotagmin 16
<a href="#">Details</a>	420	79	hsa-miR-1271-5p	<a href="#">RHPN2</a>	rhophilin Rho GTPase binding protein 2
<a href="#">Details</a>	421	79	hsa-miR-1271-5p	<a href="#">DEGS1</a>	delta 4-desaturase, sphingolipid 1
<a href="#">Details</a>	422	79	hsa-miR-1271-5p	<a href="#">OPN5</a>	opsin 5
<a href="#">Details</a>	423	79	hsa-miR-1271-5p	<a href="#">CADM1</a>	cell adhesion molecule 1
<a href="#">Details</a>	424	79	hsa-miR-1271-5p	<a href="#">ZNF667</a>	zinc finger protein 667
<a href="#">Details</a>	425	79	hsa-miR-1271-5p	<a href="#">TMEM189</a>	transmembrane protein 189
<a href="#">Details</a>	426	79	hsa-miR-1271-5p	<a href="#">NLN</a>	neurolysin
<a href="#">Details</a>	427	79	hsa-miR-1271-5p	<a href="#">DNAJC30</a>	DnaJ heat shock protein family (Hsp40) member C30
<a href="#">Details</a>	428	79	hsa-miR-1271-5p	<a href="#">GRM7</a>	glutamate metabotropic receptor 7
<a href="#">Details</a>	429	79	hsa-miR-1271-5p	<a href="#">DENND2C</a>	DENN domain containing 2C
<a href="#">Details</a>	430	79	hsa-miR-1271-5p	<a href="#">TSKU</a>	tsukushi, small leucine rich proteoglycan
<a href="#">Details</a>	431	79	hsa-miR-1271-5p	<a href="#">GPM6A</a>	glycoprotein M6A
<a href="#">Details</a>	432	78	hsa-miR-1271-5p	<a href="#">RDH10</a>	retinol dehydrogenase 10
<a href="#">Details</a>	433	78	hsa-miR-1271-5p	<a href="#">ADAM23</a>	ADAM metallopeptidase domain 23
<a href="#">Details</a>	434	78	hsa-miR-1271-5p	<a href="#">FADS1</a>	fatty acid desaturase 1
<a href="#">Details</a>	435	78	hsa-miR-1271-5p	<a href="#">SP3</a>	Sp3 transcription factor
<a href="#">Details</a>	436	78	hsa-miR-1271-5p	<a href="#">GRHL2</a>	grainyhead like transcription factor 2
<a href="#">Details</a>	437	78	hsa-miR-1271-5p	<a href="#">FYN</a>	FYN proto-oncogene, Src family tyrosine kinase
<a href="#">Details</a>	438	78	hsa-miR-1271-5p	<a href="#">FBXW11</a>	F-box and WD repeat domain containing 11
<a href="#">Details</a>	439	78	hsa-miR-1271-5p	<a href="#">KCTD2</a>	potassium channel tetramerization domain containing 2
<a href="#">Details</a>	440	78	hsa-miR-1271-5p	<a href="#">PPP1R11</a>	protein phosphatase 1 regulatory inhibitor subunit 11
<a href="#">Details</a>	441	78	hsa-miR-1271-5p	<a href="#">BICD2</a>	BICD cargo adaptor 2
<a href="#">Details</a>	442	78	hsa-miR-1271-5p	<a href="#">CAMK2N1</a>	calcium/calmodulin dependent protein kinase II inhibitor 1

<a href="#">Details</a>	443	78	hsa-miR-1271-5p	<a href="#">GABRB1</a>	gamma-aminobutyric acid type A receptor beta1 subunit
<a href="#">Details</a>	444	78	hsa-miR-1271-5p	<a href="#">ZNF449</a>	zinc finger protein 449
<a href="#">Details</a>	445	78	hsa-miR-1271-5p	<a href="#">NSUN6</a>	NOP2/Sun RNA methyltransferase family member 6
<a href="#">Details</a>	446	78	hsa-miR-1271-5p	<a href="#">NHLRC3</a>	NHL repeat containing 3
<a href="#">Details</a>	447	78	hsa-miR-1271-5p	<a href="#">LDB3</a>	LIM domain binding 3
<a href="#">Details</a>	448	77	hsa-miR-1271-5p	<a href="#">IGSF11</a>	immunoglobulin superfamily member 11
<a href="#">Details</a>	449	77	hsa-miR-1271-5p	<a href="#">CREBPF</a>	CREB3 regulatory factor
<a href="#">Details</a>	450	77	hsa-miR-1271-5p	<a href="#">KLHL8</a>	kelch like family member 8
<a href="#">Details</a>	451	77	hsa-miR-1271-5p	<a href="#">GNAO1</a>	G protein subunit alpha 01
<a href="#">Details</a>	452	77	hsa-miR-1271-5p	<a href="#">EDNRB</a>	endothelin receptor type B
<a href="#">Details</a>	453	77	hsa-miR-1271-5p	<a href="#">SELENOI</a>	selenoprotein I
<a href="#">Details</a>	454	77	hsa-miR-1271-5p	<a href="#">PCCA</a>	propionyl-CoA carboxylase subunit alpha
<a href="#">Details</a>	455	77	hsa-miR-1271-5p	<a href="#">HBP1</a>	HMG-box transcription factor 1
<a href="#">Details</a>	456	77	hsa-miR-1271-5p	<a href="#">CDK6</a>	cyclin dependent kinase 6
<a href="#">Details</a>	457	77	hsa-miR-1271-5p	<a href="#">ZIC2</a>	Zic family member 2
<a href="#">Details</a>	458	77	hsa-miR-1271-5p	<a href="#">PPP4R2</a>	protein phosphatase 4 regulatory subunit 2
<a href="#">Details</a>	459	77	hsa-miR-1271-5p	<a href="#">TBX5</a>	T-box 5
<a href="#">Details</a>	460	77	hsa-miR-1271-5p	<a href="#">SLC9A2</a>	solute carrier family 9 member A2
<a href="#">Details</a>	461	77	hsa-miR-1271-5p	<a href="#">ATP8A1</a>	ATPase phospholipid transporting 8A1
<a href="#">Details</a>	462	77	hsa-miR-1271-5p	<a href="#">FAM168A</a>	family with sequence similarity 168 member A
<a href="#">Details</a>	463	77	hsa-miR-1271-5p	<a href="#">PC</a>	pyruvate carboxylase
<a href="#">Details</a>	464	77	hsa-miR-1271-5p	<a href="#">AMOTL2</a>	angiomotin like 2
<a href="#">Details</a>	465	77	hsa-miR-1271-5p	<a href="#">CTNND1</a>	catenin delta 1
<a href="#">Details</a>	466	77	hsa-miR-1271-5p	<a href="#">CAMKK2</a>	calcium/calmodulin dependent protein kinase kinase 2
<a href="#">Details</a>	467	77	hsa-miR-1271-5p	<a href="#">CLVS2</a>	clavesin 2
<a href="#">Details</a>	468	76	hsa-miR-1271-5p	<a href="#">DEPDC1</a>	DEP domain containing 1
<a href="#">Details</a>	469	76	hsa-miR-1271-5p	<a href="#">GNE</a>	glucosamine (UDP-N-acetyl)-2-epimerase/N-acetylmannosamine kinase
<a href="#">Details</a>	470	76	hsa-miR-1271-5p	<a href="#">NDST1</a>	N-deacetylase and N-sulfotransferase 1
<a href="#">Details</a>	471	76	hsa-miR-1271-5p	<a href="#">OSBPL10</a>	oxysterol binding protein like 10
<a href="#">Details</a>	472	76	hsa-miR-1271-5p	<a href="#">AATK</a>	apoptosis associated tyrosine kinase
<a href="#">Details</a>	473	76	hsa-miR-1271-5p	<a href="#">REEP1</a>	receptor accessory protein 1
<a href="#">Details</a>	474	76	hsa-miR-1271-5p	<a href="#">CLOCK</a>	clock circadian regulator
<a href="#">Details</a>	475	76	hsa-miR-1271-5p	<a href="#">INSIG2</a>	insulin induced gene 2
<a href="#">Details</a>	476	76	hsa-miR-1271-5p	<a href="#">CELSR1</a>	cadherin EGF LAG seven-pass G-type receptor 1
<a href="#">Details</a>	477	76	hsa-miR-1271-5p	<a href="#">HRASLS5</a>	HRAS like suppressor family member 5
<a href="#">Details</a>	478	76	hsa-miR-1271-5p	<a href="#">RAD23B</a>	RAD23 homolog B, nucleotide excision repair protein
<a href="#">Details</a>	479	76	hsa-miR-1271-5p	<a href="#">TGFBR1</a>	transforming growth factor beta receptor 1
<a href="#">Details</a>	480	76	hsa-miR-1271-5p	<a href="#">MMS22L</a>	MMS22 like, DNA repair protein
<a href="#">Details</a>	481	76	hsa-miR-1271-5p	<a href="#">SLMAP</a>	sarcolemma associated protein
<a href="#">Details</a>	482	76	hsa-miR-1271-5p	<a href="#">VSIG10</a>	V-set and immunoglobulin domain containing 10
<a href="#">Details</a>	483	75	hsa-miR-1271-5p	<a href="#">MAB21L2</a>	mab-21 like 2
<a href="#">Details</a>	484	75	hsa-miR-1271-5p	<a href="#">ADGRA2</a>	adhesion G protein-coupled receptor A2
<a href="#">Details</a>	485	75	hsa-miR-1271-5p	<a href="#">MAPRE1</a>	microtubule associated protein RP/EB family member 1
<a href="#">Details</a>	486	75	hsa-miR-1271-5p	<a href="#">PAPPA</a>	pappalysin 1
<a href="#">Details</a>	487	75	hsa-miR-1271-5p	<a href="#">UGT8</a>	UDP glycosyltransferase 8

<a href="#">Details</a>	488	75	hsa-miR-1271-5p	<a href="#">GID4</a>	GID complex subunit 4 homolog
<a href="#">Details</a>	489	75	hsa-miR-1271-5p	<a href="#">CPEB1</a>	cytoplasmic polyadenylation element binding protein 1
<a href="#">Details</a>	490	75	hsa-miR-1271-5p	<a href="#">CREB1</a>	cAMP responsive element binding protein 1
<a href="#">Details</a>	491	75	hsa-miR-1271-5p	<a href="#">MBLAC2</a>	metallo-beta-lactamase domain containing 2
<a href="#">Details</a>	492	75	hsa-miR-1271-5p	<a href="#">OTUD6B</a>	OTU domain containing 6B
<a href="#">Details</a>	493	75	hsa-miR-1271-5p	<a href="#">RAB7A</a>	RAB7A, member RAS oncogene family
<a href="#">Details</a>	494	75	hsa-miR-1271-5p	<a href="#">PCNX1</a>	pecanex 1
<a href="#">Details</a>	495	75	hsa-miR-1271-5p	<a href="#">SEMA6A</a>	semaphorin 6A
<a href="#">Details</a>	496	75	hsa-miR-1271-5p	<a href="#">STK35</a>	serine/threonine kinase 35
<a href="#">Details</a>	497	75	hsa-miR-1271-5p	<a href="#">TBL1X</a>	transducin beta like 1 X-linked
<a href="#">Details</a>	498	75	hsa-miR-1271-5p	<a href="#">KCNJ14</a>	potassium voltage-gated channel subfamily J member 14
<a href="#">Details</a>	499	75	hsa-miR-1271-5p	<a href="#">MIEF2</a>	mitochondrial elongation factor 2
<a href="#">Details</a>	500	75	hsa-miR-1271-5p	<a href="#">KIDINS220</a>	kinase D interacting substrate 220
<a href="#">Details</a>	501	75	hsa-miR-1271-5p	<a href="#">PLPBP</a>	pyridoxal phosphate binding protein
<a href="#">Details</a>	502	74	hsa-miR-1271-5p	<a href="#">MTRR</a>	5-methyltetrahydrofolate-homocysteine methyltransferase reductase
<a href="#">Details</a>	503	74	hsa-miR-1271-5p	<a href="#">MAGI1</a>	membrane associated guanylate kinase, WW and PDZ domain containing 1
<a href="#">Details</a>	504	74	hsa-miR-1271-5p	<a href="#">DHCR24</a>	24-dehydrocholesterol reductase
<a href="#">Details</a>	505	74	hsa-miR-1271-5p	<a href="#">ALDH6A1</a>	aldehyde dehydrogenase 6 family member A1
<a href="#">Details</a>	506	74	hsa-miR-1271-5p	<a href="#">MRTFB</a>	myocardin related transcription factor B
<a href="#">Details</a>	507	74	hsa-miR-1271-5p	<a href="#">NHLH2</a>	nescient helix-loop-helix 2
<a href="#">Details</a>	508	74	hsa-miR-1271-5p	<a href="#">EZR</a>	ezrin
<a href="#">Details</a>	509	74	hsa-miR-1271-5p	<a href="#">NIPA1</a>	NIPA magnesium transporter 1
<a href="#">Details</a>	510	74	hsa-miR-1271-5p	<a href="#">SLC36A2</a>	solute carrier family 36 member 2
<a href="#">Details</a>	511	74	hsa-miR-1271-5p	<a href="#">PTH</a>	parathyroid hormone
<a href="#">Details</a>	512	74	hsa-miR-1271-5p	<a href="#">SIK3</a>	SIK family kinase 3
<a href="#">Details</a>	513	74	hsa-miR-1271-5p	<a href="#">CLSPN</a>	claspin
<a href="#">Details</a>	514	74	hsa-miR-1271-5p	<a href="#">CAMSAP2</a>	calmodulin regulated spectrin associated protein family member 2
<a href="#">Details</a>	515	74	hsa-miR-1271-5p	<a href="#">ELL</a>	elongation factor for RNA polymerase II
<a href="#">Details</a>	516	74	hsa-miR-1271-5p	<a href="#">MAP4K4</a>	mitogen-activated protein kinase kinase kinase kinase 4
<a href="#">Details</a>	517	74	hsa-miR-1271-5p	<a href="#">MYOCD</a>	myocardin
<a href="#">Details</a>	518	73	hsa-miR-1271-5p	<a href="#">RECK</a>	reversion inducing cysteine rich protein with kazal motifs
<a href="#">Details</a>	519	73	hsa-miR-1271-5p	<a href="#">CELF2</a>	CUGBP Elav-like family member 2
<a href="#">Details</a>	520	73	hsa-miR-1271-5p	<a href="#">FOXP2</a>	forkhead box P2
<a href="#">Details</a>	521	73	hsa-miR-1271-5p	<a href="#">TMEM19</a>	transmembrane protein 19
<a href="#">Details</a>	522	73	hsa-miR-1271-5p	<a href="#">RAB27B</a>	RAB27B, member RAS oncogene family
<a href="#">Details</a>	523	73	hsa-miR-1271-5p	<a href="#">TMEM50B</a>	transmembrane protein 50B
<a href="#">Details</a>	524	73	hsa-miR-1271-5p	<a href="#">RGPD2</a>	RANBP2-like and GRIP domain containing 2
<a href="#">Details</a>	525	73	hsa-miR-1271-5p	<a href="#">ZPBP</a>	zona pellucida binding protein
<a href="#">Details</a>	526	73	hsa-miR-1271-5p	<a href="#">TNFSF4</a>	TNF superfamily member 4
<a href="#">Details</a>	527	73	hsa-miR-1271-5p	<a href="#">PCDH11X</a>	protocadherin 11 X-linked
<a href="#">Details</a>	528	73	hsa-miR-1271-5p	<a href="#">HDAC9</a>	histone deacetylase 9
<a href="#">Details</a>	529	73	hsa-miR-1271-5p	<a href="#">RND3</a>	Rho family GTPase 3
<a href="#">Details</a>	530	73	hsa-miR-1271-5p	<a href="#">PLOD3</a>	procollagen-lysine,2-oxoglutarate 5-dioxygenase 3
<a href="#">Details</a>	531	73	hsa-miR-1271-5p	<a href="#">RCC2</a>	regulator of chromosome condensation 2

<a href="#">Details</a>	532	73	hsa-miR-1271-5p	<a href="#">PCDH11Y</a>	protocadherin 11 Y-linked
<a href="#">Details</a>	533	73	hsa-miR-1271-5p	<a href="#">RHOJ</a>	ras homolog family member J
<a href="#">Details</a>	534	73	hsa-miR-1271-5p	<a href="#">ZC3H12C</a>	zinc finger CCCH-type containing 12C
<a href="#">Details</a>	535	73	hsa-miR-1271-5p	<a href="#">ZNF10</a>	zinc finger protein 10
<a href="#">Details</a>	536	72	hsa-miR-1271-5p	<a href="#">DGCR2</a>	DiGeorge syndrome critical region gene 2
<a href="#">Details</a>	537	72	hsa-miR-1271-5p	<a href="#">KCNC2</a>	potassium voltage-gated channel subfamily C member 2
<a href="#">Details</a>	538	72	hsa-miR-1271-5p	<a href="#">DIXDC1</a>	DIX domain containing 1
<a href="#">Details</a>	539	72	hsa-miR-1271-5p	<a href="#">MTMR12</a>	myotubularin related protein 12
<a href="#">Details</a>	540	72	hsa-miR-1271-5p	<a href="#">MOB1B</a>	MOB kinase activator 1B
<a href="#">Details</a>	541	72	hsa-miR-1271-5p	<a href="#">DSCAM</a>	DS cell adhesion molecule
<a href="#">Details</a>	542	72	hsa-miR-1271-5p	<a href="#">UNC13B</a>	unc-13 homolog B
<a href="#">Details</a>	543	72	hsa-miR-1271-5p	<a href="#">SLC26A4</a>	solute carrier family 26 member 4
<a href="#">Details</a>	544	72	hsa-miR-1271-5p	<a href="#">SLC10A3</a>	solute carrier family 10 member 3
<a href="#">Details</a>	545	72	hsa-miR-1271-5p	<a href="#">TM4SF20</a>	transmembrane 4 L six family member 20
<a href="#">Details</a>	546	72	hsa-miR-1271-5p	<a href="#">RYR3</a>	ryanodine receptor 3
<a href="#">Details</a>	547	72	hsa-miR-1271-5p	<a href="#">NF1</a>	neurofibromin 1
<a href="#">Details</a>	548	72	hsa-miR-1271-5p	<a href="#">MYB</a>	MYB proto-oncogene, transcription factor
<a href="#">Details</a>	549	72	hsa-miR-1271-5p	<a href="#">CGGBP1</a>	CGG triplet repeat binding protein 1
<a href="#">Details</a>	550	72	hsa-miR-1271-5p	<a href="#">CLCN5</a>	chloride voltage-gated channel 5
<a href="#">Details</a>	551	72	hsa-miR-1271-5p	<a href="#">SLC16A7</a>	solute carrier family 16 member 7
<a href="#">Details</a>	552	71	hsa-miR-1271-5p	<a href="#">NAMPT</a>	nicotinamide phosphoribosyltransferase
<a href="#">Details</a>	553	71	hsa-miR-1271-5p	<a href="#">MEF2C</a>	myocyte enhancer factor 2C
<a href="#">Details</a>	554	71	hsa-miR-1271-5p	<a href="#">RNF169</a>	ring finger protein 169
<a href="#">Details</a>	555	71	hsa-miR-1271-5p	<a href="#">DCAF10</a>	DDB1 and CUL4 associated factor 10
<a href="#">Details</a>	556	71	hsa-miR-1271-5p	<a href="#">EEF1E1</a>	eukaryotic translation elongation factor 1 epsilon 1
<a href="#">Details</a>	557	71	hsa-miR-1271-5p	<a href="#">TBX15</a>	T-box 15
<a href="#">Details</a>	558	71	hsa-miR-1271-5p	<a href="#">FXR1</a>	FMR1 autosomal homolog 1
<a href="#">Details</a>	559	71	hsa-miR-1271-5p	<a href="#">CD36</a>	CD36 molecule
<a href="#">Details</a>	560	71	hsa-miR-1271-5p	<a href="#">CAMTA1</a>	calmodulin binding transcription activator 1
<a href="#">Details</a>	561	71	hsa-miR-1271-5p	<a href="#">SLCO3A1</a>	solute carrier organic anion transporter family member 3A1
<a href="#">Details</a>	562	71	hsa-miR-1271-5p	<a href="#">TSGA10</a>	testis specific 10
<a href="#">Details</a>	563	71	hsa-miR-1271-5p	<a href="#">HDHD2</a>	haloacid dehalogenase like hydrolase domain containing 2
<a href="#">Details</a>	564	71	hsa-miR-1271-5p	<a href="#">HOMER1</a>	homer scaffold protein 1
<a href="#">Details</a>	565	71	hsa-miR-1271-5p	<a href="#">INO80D</a>	INO80 complex subunit D
<a href="#">Details</a>	566	71	hsa-miR-1271-5p	<a href="#">FRMPD4</a>	FERM and PDZ domain containing 4
<a href="#">Details</a>	567	71	hsa-miR-1271-5p	<a href="#">C1GALT1</a>	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase 1
<a href="#">Details</a>	568	71	hsa-miR-1271-5p	<a href="#">VANGL2</a>	VANGL planar cell polarity protein 2
<a href="#">Details</a>	569	71	hsa-miR-1271-5p	<a href="#">DKK2</a>	dickkopf WNT signaling pathway inhibitor 2
<a href="#">Details</a>	570	71	hsa-miR-1271-5p	<a href="#">GPRC5B</a>	G protein-coupled receptor class C group 5 member B
<a href="#">Details</a>	571	71	hsa-miR-1271-5p	<a href="#">TENM4</a>	teneurin transmembrane protein 4
<a href="#">Details</a>	572	70	hsa-miR-1271-5p	<a href="#">STARD7</a>	StAR related lipid transfer domain containing 7
<a href="#">Details</a>	573	70	hsa-miR-1271-5p	<a href="#">DERL2</a>	derlin 2
<a href="#">Details</a>	574	70	hsa-miR-1271-5p	<a href="#">NAA50</a>	N(alpha)-acetyltransferase 50, NatE catalytic subunit
<a href="#">Details</a>	575	70	hsa-miR-1271-5p	<a href="#">CASTOR2</a>	cytosolic arginine sensor for mTORC1 subunit

2

<a href="#">Details</a>	576	70	hsa-miR-1271-5p	<a href="#">PROK2</a>	prokineticin 2
<a href="#">Details</a>	577	70	hsa-miR-1271-5p	<a href="#">GPR85</a>	G protein-coupled receptor 85
<a href="#">Details</a>	578	70	hsa-miR-1271-5p	<a href="#">STMN2</a>	stathmin 2
<a href="#">Details</a>	579	70	hsa-miR-1271-5p	<a href="#">CCSER2</a>	coiled-coil serine rich protein 2
<a href="#">Details</a>	580	70	hsa-miR-1271-5p	<a href="#">INPP5A</a>	inositol polyphosphate-5-phosphatase A
<a href="#">Details</a>	581	70	hsa-miR-1271-5p	<a href="#">BSDC1</a>	BSD domain containing 1
<a href="#">Details</a>	582	70	hsa-miR-1271-5p	<a href="#">RIOK3</a>	RIO kinase 3
<a href="#">Details</a>	583	70	hsa-miR-1271-5p	<a href="#">VCPIP1</a>	valosin containing protein interacting protein 1
<a href="#">Details</a>	584	70	hsa-miR-1271-5p	<a href="#">SEC62</a>	SEC62 homolog, preprotein translocation factor
<a href="#">Details</a>	585	70	hsa-miR-1271-5p	<a href="#">SEPT11</a>	septin 11
<a href="#">Details</a>	586	70	hsa-miR-1271-5p	<a href="#">RABGAP1</a>	RAB GTPase activating protein 1
<a href="#">Details</a>	587	70	hsa-miR-1271-5p	<a href="#">MFHAS1</a>	malignant fibrous histiocytoma amplified sequence 1
<a href="#">Details</a>	588	70	hsa-miR-1271-5p	<a href="#">TBX1</a>	T-box 1
<a href="#">Details</a>	589	70	hsa-miR-1271-5p	<a href="#">SPATS2L</a>	spermatogenesis associated serine rich 2 like
<a href="#">Details</a>	590	70	hsa-miR-1271-5p	<a href="#">BCAT2</a>	branched chain amino acid transaminase 2
<a href="#">Details</a>	591	70	hsa-miR-1271-5p	<a href="#">KCNN3</a>	potassium calcium-activated channel subfamily N member 3
<a href="#">Details</a>	592	70	hsa-miR-1271-5p	<a href="#">LRP6</a>	LDL receptor related protein 6
<a href="#">Details</a>	593	70	hsa-miR-1271-5p	<a href="#">TMEM245</a>	transmembrane protein 245
<a href="#">Details</a>	594	69	hsa-miR-1271-5p	<a href="#">MAGI3</a>	membrane associated guanylate kinase, WW and PDZ domain containing 3
<a href="#">Details</a>	595	69	hsa-miR-1271-5p	<a href="#">RAB6B</a>	RAB6B, member RAS oncogene family
<a href="#">Details</a>	596	69	hsa-miR-1271-5p	<a href="#">C10orf67</a>	chromosome 10 open reading frame 67
<a href="#">Details</a>	597	69	hsa-miR-1271-5p	<a href="#">CACNA2D1</a>	calcium voltage-gated channel auxiliary subunit alpha2delta 1
<a href="#">Details</a>	598	69	hsa-miR-1271-5p	<a href="#">CHMP4A</a>	charged multivesicular body protein 4A
<a href="#">Details</a>	599	69	hsa-miR-1271-5p	<a href="#">GPHN</a>	gephyrin
<a href="#">Details</a>	600	69	hsa-miR-1271-5p	<a href="#">ONECUT2</a>	one cut homeobox 2
<a href="#">Details</a>	601	69	hsa-miR-1271-5p	<a href="#">FHL1</a>	four and a half LIM domains 1
<a href="#">Details</a>	602	69	hsa-miR-1271-5p	<a href="#">ABAT</a>	4-aminobutyrate aminotransferase
<a href="#">Details</a>	603	69	hsa-miR-1271-5p	<a href="#">GRID1</a>	glutamate ionotropic receptor delta type subunit 1
<a href="#">Details</a>	604	69	hsa-miR-1271-5p	<a href="#">LIMS1</a>	LIM zinc finger domain containing 1
<a href="#">Details</a>	605	69	hsa-miR-1271-5p	<a href="#">CTXN2</a>	cortexin 2
<a href="#">Details</a>	606	69	hsa-miR-1271-5p	<a href="#">ZFAND4</a>	zinc finger AN1-type containing 4
<a href="#">Details</a>	607	69	hsa-miR-1271-5p	<a href="#">LIPG</a>	lipase G, endothelial type
<a href="#">Details</a>	608	69	hsa-miR-1271-5p	<a href="#">RAPGEF5</a>	Rap guanine nucleotide exchange factor 5
<a href="#">Details</a>	609	69	hsa-miR-1271-5p	<a href="#">FBXO32</a>	F-box protein 32
<a href="#">Details</a>	610	69	hsa-miR-1271-5p	<a href="#">EPB41L3</a>	erythrocyte membrane protein band 4.1 like 3
<a href="#">Details</a>	611	69	hsa-miR-1271-5p	<a href="#">UNC5D</a>	unc-5 netrin receptor D
<a href="#">Details</a>	612	69	hsa-miR-1271-5p	<a href="#">DMRT3</a>	doublesex and mab-3 related transcription factor 3
<a href="#">Details</a>	613	69	hsa-miR-1271-5p	<a href="#">SLC43A2</a>	solute carrier family 43 member 2
<a href="#">Details</a>	614	69	hsa-miR-1271-5p	<a href="#">DIPK2A</a>	divergent protein kinase domain 2A
<a href="#">Details</a>	615	69	hsa-miR-1271-5p	<a href="#">RPL36A-HNRNPH2</a>	RPL36A-HNRNPH2 readthrough
<a href="#">Details</a>	616	69	hsa-miR-1271-5p	<a href="#">DCX</a>	doublecortin
<a href="#">Details</a>	617	69	hsa-miR-1271-5p	<a href="#">TRABD2B</a>	TraB domain containing 2B
<a href="#">Details</a>	618	69	hsa-miR-1271-5p	<a href="#">MRPL42</a>	mitochondrial ribosomal protein L42
<a href="#">Details</a>	619	69	hsa-miR-1271-5p	<a href="#">TMEM140</a>	transmembrane protein 140

<a href="#">Details</a>	620	69	hsa-miR-1271-5p	<a href="#">INA</a>	internexin neuronal intermediate filament protein alpha
<a href="#">Details</a>	621	69	hsa-miR-1271-5p	<a href="#">SMIM13</a>	small integral membrane protein 13
<a href="#">Details</a>	622	69	hsa-miR-1271-5p	<a href="#">CLPTM1L</a>	CLPTM1 like
<a href="#">Details</a>	623	69	hsa-miR-1271-5p	<a href="#">PCDH17</a>	protocadherin 17
<a href="#">Details</a>	624	69	hsa-miR-1271-5p	<a href="#">SEC14L2</a>	SEC14 like lipid binding 2
<a href="#">Details</a>	625	68	hsa-miR-1271-5p	<a href="#">OPN1MW2</a>	opsin 1, medium wave sensitive 2
<a href="#">Details</a>	626	68	hsa-miR-1271-5p	<a href="#">GRK3</a>	G protein-coupled receptor kinase 3
<a href="#">Details</a>	627	68	hsa-miR-1271-5p	<a href="#">TMEM163</a>	transmembrane protein 163
<a href="#">Details</a>	628	68	hsa-miR-1271-5p	<a href="#">GNA13</a>	G protein subunit alpha 13
<a href="#">Details</a>	629	68	hsa-miR-1271-5p	<a href="#">TSNAX</a>	translin associated factor X
<a href="#">Details</a>	630	68	hsa-miR-1271-5p	<a href="#">ARHGAP12</a>	Rho GTPase activating protein 12
<a href="#">Details</a>	631	68	hsa-miR-1271-5p	<a href="#">OPN1LW</a>	opsin 1, long wave sensitive
<a href="#">Details</a>	632	68	hsa-miR-1271-5p	<a href="#">INTS6</a>	integrator complex subunit 6
<a href="#">Details</a>	633	68	hsa-miR-1271-5p	<a href="#">SGMS2</a>	sphingomyelin synthase 2
<a href="#">Details</a>	634	68	hsa-miR-1271-5p	<a href="#">MYO16</a>	myosin XVI
<a href="#">Details</a>	635	68	hsa-miR-1271-5p	<a href="#">SHOX2</a>	short stature homeobox 2
<a href="#">Details</a>	636	68	hsa-miR-1271-5p	<a href="#">FEM1C</a>	fem-1 homolog C
<a href="#">Details</a>	637	68	hsa-miR-1271-5p	<a href="#">MAPK9</a>	mitogen-activated protein kinase 9
<a href="#">Details</a>	638	68	hsa-miR-1271-5p	<a href="#">IQSEC1</a>	IQ motif and Sec7 domain 1
<a href="#">Details</a>	639	67	hsa-miR-1271-5p	<a href="#">N4BP1</a>	NEDD4 binding protein 1
<a href="#">Details</a>	640	67	hsa-miR-1271-5p	<a href="#">CUL4A</a>	cullin 4A
<a href="#">Details</a>	641	67	hsa-miR-1271-5p	<a href="#">KTN1</a>	kinectin 1
<a href="#">Details</a>	642	67	hsa-miR-1271-5p	<a href="#">KCNK2</a>	potassium two pore domain channel subfamily K member 2
<a href="#">Details</a>	643	67	hsa-miR-1271-5p	<a href="#">NR4A3</a>	nuclear receptor subfamily 4 group A member 3
<a href="#">Details</a>	644	67	hsa-miR-1271-5p	<a href="#">CBX2</a>	chromobox 2
<a href="#">Details</a>	645	67	hsa-miR-1271-5p	<a href="#">WDR72</a>	WD repeat domain 72
<a href="#">Details</a>	646	67	hsa-miR-1271-5p	<a href="#">PARP15</a>	poly(ADP-ribose) polymerase family member 15
<a href="#">Details</a>	647	67	hsa-miR-1271-5p	<a href="#">NAV3</a>	neuron navigator 3
<a href="#">Details</a>	648	67	hsa-miR-1271-5p	<a href="#">JAZF1</a>	JAZF zinc finger 1
<a href="#">Details</a>	649	67	hsa-miR-1271-5p	<a href="#">CEP19</a>	centrosomal protein 19
<a href="#">Details</a>	650	67	hsa-miR-1271-5p	<a href="#">TMEM145</a>	transmembrane protein 145
<a href="#">Details</a>	651	67	hsa-miR-1271-5p	<a href="#">LCOR</a>	ligand dependent nuclear receptor corepressor
<a href="#">Details</a>	652	67	hsa-miR-1271-5p	<a href="#">DSG2</a>	desmoglein 2
<a href="#">Details</a>	653	66	hsa-miR-1271-5p	<a href="#">PJA2</a>	praia ring finger ubiquitin ligase 2
<a href="#">Details</a>	654	66	hsa-miR-1271-5p	<a href="#">CDV3</a>	CDV3 homolog
<a href="#">Details</a>	655	66	hsa-miR-1271-5p	<a href="#">UMAD1</a>	UBAP1-MVB12-associated (UMA) domain containing 1
<a href="#">Details</a>	656	66	hsa-miR-1271-5p	<a href="#">WASL</a>	Wiskott-Aldrich syndrome like
<a href="#">Details</a>	657	66	hsa-miR-1271-5p	<a href="#">ULBP1</a>	UL16 binding protein 1
<a href="#">Details</a>	658	66	hsa-miR-1271-5p	<a href="#">IPO9</a>	importin 9
<a href="#">Details</a>	659	66	hsa-miR-1271-5p	<a href="#">ALKBH1</a>	alkB homolog 1, histone H2A dioxygenase
<a href="#">Details</a>	660	66	hsa-miR-1271-5p	<a href="#">FAM110B</a>	family with sequence similarity 110 member B
<a href="#">Details</a>	661	66	hsa-miR-1271-5p	<a href="#">GTF3C4</a>	general transcription factor IIIC subunit 4
<a href="#">Details</a>	662	66	hsa-miR-1271-5p	<a href="#">PLPPR2</a>	phospholipid phosphatase related 2
<a href="#">Details</a>	663	66	hsa-miR-1271-5p	<a href="#">RAB9B</a>	RAB9B, member RAS oncogene family
<a href="#">Details</a>	664	66	hsa-miR-1271-5p	<a href="#">HOXA5</a>	homeobox A5
<a href="#">Details</a>	665	66	hsa-miR-1271-5p	<a href="#">MAPK1IP1L</a>	mitogen-activated protein kinase 1 interacting protein 1 like

<a href="#">Details</a>	666	66	hsa-miR-1271-5p	<a href="#">CHAMP1</a>	chromosome alignment maintaining phosphoprotein 1
<a href="#">Details</a>	667	66	hsa-miR-1271-5p	<a href="#">VCL</a>	vinculin
<a href="#">Details</a>	668	66	hsa-miR-1271-5p	<a href="#">TMEM170A</a>	transmembrane protein 170A
<a href="#">Details</a>	669	66	hsa-miR-1271-5p	<a href="#">SLC25A1</a>	solute carrier family 25 member 1
<a href="#">Details</a>	670	65	hsa-miR-1271-5p	<a href="#">PIK3CA</a>	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
<a href="#">Details</a>	671	65	hsa-miR-1271-5p	<a href="#">SYNE2</a>	spectrin repeat containing nuclear envelope protein 2
<a href="#">Details</a>	672	65	hsa-miR-1271-5p	<a href="#">KLRF1</a>	killer cell lectin like receptor F1
<a href="#">Details</a>	673	65	hsa-miR-1271-5p	<a href="#">ACVR2B</a>	activin A receptor type 2B
<a href="#">Details</a>	674	65	hsa-miR-1271-5p	<a href="#">CDC42BPB</a>	CDC42 binding protein kinase beta
<a href="#">Details</a>	675	65	hsa-miR-1271-5p	<a href="#">TACC1</a>	transforming acidic coiled-coil containing protein 1
<a href="#">Details</a>	676	65	hsa-miR-1271-5p	<a href="#">APBB2</a>	amyloid beta precursor protein binding family B member 2
<a href="#">Details</a>	677	65	hsa-miR-1271-5p	<a href="#">RYK</a>	receptor-like tyrosine kinase
<a href="#">Details</a>	678	65	hsa-miR-1271-5p	<a href="#">EGR3</a>	early growth response 3
<a href="#">Details</a>	679	65	hsa-miR-1271-5p	<a href="#">PES1</a>	pescadillo ribosomal biogenesis factor 1
<a href="#">Details</a>	680	65	hsa-miR-1271-5p	<a href="#">FAM57A</a>	family with sequence similarity 57 member A
<a href="#">Details</a>	681	64	hsa-miR-1271-5p	<a href="#">ABCA1</a>	ATP binding cassette subfamily A member 1
<a href="#">Details</a>	682	64	hsa-miR-1271-5p	<a href="#">PFN1</a>	profilin 1
<a href="#">Details</a>	683	64	hsa-miR-1271-5p	<a href="#">DGKK</a>	diacylglycerol kinase kappa
<a href="#">Details</a>	684	64	hsa-miR-1271-5p	<a href="#">EVI5L</a>	ecotropic viral integration site 5 like
<a href="#">Details</a>	685	64	hsa-miR-1271-5p	<a href="#">FAM53C</a>	family with sequence similarity 53 member C
<a href="#">Details</a>	686	64	hsa-miR-1271-5p	<a href="#">ULBP3</a>	UL16 binding protein 3
<a href="#">Details</a>	687	64	hsa-miR-1271-5p	<a href="#">PAX5</a>	paired box 5
<a href="#">Details</a>	688	64	hsa-miR-1271-5p	<a href="#">TM9SF4</a>	transmembrane 9 superfamily member 4
<a href="#">Details</a>	689	64	hsa-miR-1271-5p	<a href="#">NPTX1</a>	neuronal pentraxin 1
<a href="#">Details</a>	690	64	hsa-miR-1271-5p	<a href="#">C21orf91</a>	chromosome 21 open reading frame 91
<a href="#">Details</a>	691	64	hsa-miR-1271-5p	<a href="#">SNAI2</a>	snail family transcriptional repressor 2
<a href="#">Details</a>	692	64	hsa-miR-1271-5p	<a href="#">TAB3</a>	TGF-beta activated kinase 1 (MAP3K7) binding protein 3
<a href="#">Details</a>	693	64	hsa-miR-1271-5p	<a href="#">ARHGAP24</a>	Rho GTPase activating protein 24
<a href="#">Details</a>	694	64	hsa-miR-1271-5p	<a href="#">ADRA2C</a>	adrenoceptor alpha 2C
<a href="#">Details</a>	695	64	hsa-miR-1271-5p	<a href="#">PDE1C</a>	phosphodiesterase 1C
<a href="#">Details</a>	696	64	hsa-miR-1271-5p	<a href="#">SLC22A23</a>	solute carrier family 22 member 23
<a href="#">Details</a>	697	64	hsa-miR-1271-5p	<a href="#">MPV17L</a>	MPV17 mitochondrial inner membrane protein like
<a href="#">Details</a>	698	64	hsa-miR-1271-5p	<a href="#">ADGRF5</a>	adhesion G protein-coupled receptor F5
<a href="#">Details</a>	699	64	hsa-miR-1271-5p	<a href="#">PREPL</a>	prolyl endopeptidase like
<a href="#">Details</a>	700	63	hsa-miR-1271-5p	<a href="#">CEP170</a>	centrosomal protein 170
<a href="#">Details</a>	701	63	hsa-miR-1271-5p	<a href="#">CACNA1C</a>	calcium voltage-gated channel subunit alpha1 C
<a href="#">Details</a>	702	63	hsa-miR-1271-5p	<a href="#">TMEM92</a>	transmembrane protein 92
<a href="#">Details</a>	703	63	hsa-miR-1271-5p	<a href="#">TRPC6</a>	transient receptor potential cation channel subfamily C member 6
<a href="#">Details</a>	704	63	hsa-miR-1271-5p	<a href="#">SMAD7</a>	SMAD family member 7
<a href="#">Details</a>	705	63	hsa-miR-1271-5p	<a href="#">RHOBTB1</a>	Rho related BTB domain containing 1
<a href="#">Details</a>	706	63	hsa-miR-1271-5p	<a href="#">MYO1C</a>	myosin IC
<a href="#">Details</a>	707	63	hsa-miR-1271-5p	<a href="#">TANC1</a>	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 1
<a href="#">Details</a>	708	63	hsa-miR-1271-5p	<a href="#">SAMD12</a>	sterile alpha motif domain containing 12

<a href="#">Details</a>	709	63	hsa-miR-1271-5p	<a href="#">SPESP1</a>	sperm equatorial segment protein 1
<a href="#">Details</a>	710	63	hsa-miR-1271-5p	<a href="#">GPR137</a>	G protein-coupled receptor 137
<a href="#">Details</a>	711	63	hsa-miR-1271-5p	<a href="#">NR1D2</a>	nuclear receptor subfamily 1 group D member 2
<a href="#">Details</a>	712	63	hsa-miR-1271-5p	<a href="#">SLC2A3</a>	solute carrier family 2 member 3
<a href="#">Details</a>	713	63	hsa-miR-1271-5p	<a href="#">PPP1R1C</a>	protein phosphatase 1 regulatory inhibitor subunit 1C
<a href="#">Details</a>	714	63	hsa-miR-1271-5p	<a href="#">BRWD1</a>	bromodomain and WD repeat domain containing 1
<a href="#">Details</a>	715	63	hsa-miR-1271-5p	<a href="#">ZBTB20</a>	zinc finger and BTB domain containing 20
<a href="#">Details</a>	716	63	hsa-miR-1271-5p	<a href="#">AVIL</a>	advillin
<a href="#">Details</a>	717	62	hsa-miR-1271-5p	<a href="#">IGDCC3</a>	immunoglobulin superfamily DCC subclass member 3
<a href="#">Details</a>	718	62	hsa-miR-1271-5p	<a href="#">THAP2</a>	THAP domain containing 2
<a href="#">Details</a>	719	62	hsa-miR-1271-5p	<a href="#">ZFAT</a>	zinc finger and AT-hook domain containing
<a href="#">Details</a>	720	62	hsa-miR-1271-5p	<a href="#">CRAMP1</a>	cramped chromatin regulator homolog 1
<a href="#">Details</a>	721	62	hsa-miR-1271-5p	<a href="#">SOCS7</a>	suppressor of cytokine signaling 7
<a href="#">Details</a>	722	62	hsa-miR-1271-5p	<a href="#">SS18</a>	SS18, nBAF chromatin remodeling complex subunit
<a href="#">Details</a>	723	62	hsa-miR-1271-5p	<a href="#">GNAQ</a>	G protein subunit alpha q
<a href="#">Details</a>	724	62	hsa-miR-1271-5p	<a href="#">TBC1D22B</a>	TBC1 domain family member 22B
<a href="#">Details</a>	725	62	hsa-miR-1271-5p	<a href="#">ECE2</a>	endothelin converting enzyme 2
<a href="#">Details</a>	726	62	hsa-miR-1271-5p	<a href="#">MICAL3</a>	microtubule associated monooxygenase, calponin and LIM domain containing 3
<a href="#">Details</a>	727	62	hsa-miR-1271-5p	<a href="#">SMC2</a>	structural maintenance of chromosomes 2
<a href="#">Details</a>	728	62	hsa-miR-1271-5p	<a href="#">KIF19</a>	kinesin family member 19
<a href="#">Details</a>	729	62	hsa-miR-1271-5p	<a href="#">ITGA6</a>	integrin subunit alpha 6
<a href="#">Details</a>	730	62	hsa-miR-1271-5p	<a href="#">FMR1</a>	fragile X mental retardation 1
<a href="#">Details</a>	731	62	hsa-miR-1271-5p	<a href="#">STX10</a>	syntaxin 10
<a href="#">Details</a>	732	62	hsa-miR-1271-5p	<a href="#">MAFF</a>	MAF bZIP transcription factor F
<a href="#">Details</a>	733	62	hsa-miR-1271-5p	<a href="#">SAP30L</a>	SAP30 like
<a href="#">Details</a>	734	62	hsa-miR-1271-5p	<a href="#">EEF1AKMT4-ECE2</a>	EEF1AKMT4-ECE2 readthrough
<a href="#">Details</a>	735	62	hsa-miR-1271-5p	<a href="#">UPRT</a>	uracil phosphoribosyltransferase homolog
<a href="#">Details</a>	736	62	hsa-miR-1271-5p	<a href="#">FNTA</a>	farnesyltransferase, CAAX box, alpha
<a href="#">Details</a>	737	62	hsa-miR-1271-5p	<a href="#">CTSB</a>	cathepsin B
<a href="#">Details</a>	738	62	hsa-miR-1271-5p	<a href="#">CSRNP1</a>	cysteine and serine rich nuclear protein 1
<a href="#">Details</a>	739	62	hsa-miR-1271-5p	<a href="#">RPAP3</a>	RNA polymerase II associated protein 3
<a href="#">Details</a>	740	62	hsa-miR-1271-5p	<a href="#">NIPBL</a>	NIPBL, cohesin loading factor
<a href="#">Details</a>	741	62	hsa-miR-1271-5p	<a href="#">ADGRL4</a>	adhesion G protein-coupled receptor L4
<a href="#">Details</a>	742	62	hsa-miR-1271-5p	<a href="#">COA4</a>	cytochrome c oxidase assembly factor 4 homolog
<a href="#">Details</a>	743	62	hsa-miR-1271-5p	<a href="#">NAPEPLD</a>	N-acyl phosphatidylethanolamine phospholipase D
<a href="#">Details</a>	744	61	hsa-miR-1271-5p	<a href="#">COG3</a>	component of oligomeric golgi complex 3
<a href="#">Details</a>	745	61	hsa-miR-1271-5p	<a href="#">MTCH2</a>	mitochondrial carrier 2
<a href="#">Details</a>	746	61	hsa-miR-1271-5p	<a href="#">LOC101927322</a>	uncharacterized LOC101927322
<a href="#">Details</a>	747	61	hsa-miR-1271-5p	<a href="#">SPAG17</a>	sperm associated antigen 17
<a href="#">Details</a>	748	61	hsa-miR-1271-5p	<a href="#">YY1AP1</a>	YY1 associated protein 1
<a href="#">Details</a>	749	61	hsa-miR-1271-5p	<a href="#">SIM1</a>	SIM bHLH transcription factor 1
<a href="#">Details</a>	750	61	hsa-miR-1271-5p	<a href="#">ZMYND19</a>	zinc finger MYND-type containing 19
<a href="#">Details</a>	751	61	hsa-miR-1271-5p	<a href="#">TP53INP1</a>	tumor protein p53 inducible nuclear protein 1
<a href="#">Details</a>	752	61	hsa-miR-1271-5p	<a href="#">PMEPA1</a>	prostate transmembrane protein, androgen

					induced 1
<a href="#">Details</a>	753	61	hsa-miR-1271-5p	<a href="#">GPLD1</a>	glycosylphosphatidylinositol specific phospholipase D1
<a href="#">Details</a>	754	61	hsa-miR-1271-5p	<a href="#">MFSD5</a>	major facilitator superfamily domain containing 5
<a href="#">Details</a>	755	61	hsa-miR-1271-5p	<a href="#">LYRM2</a>	LYR motif containing 2
<a href="#">Details</a>	756	61	hsa-miR-1271-5p	<a href="#">FAF2</a>	Fas associated factor family member 2
<a href="#">Details</a>	757	61	hsa-miR-1271-5p	<a href="#">LEPR</a>	leptin receptor
<a href="#">Details</a>	758	61	hsa-miR-1271-5p	<a href="#">TECTB</a>	tectorin beta
<a href="#">Details</a>	759	61	hsa-miR-1271-5p	<a href="#">TMEM56-RWDD3</a>	TMEM56-RWDD3 readthrough
<a href="#">Details</a>	760	61	hsa-miR-1271-5p	<a href="#">BCL2</a>	BCL2, apoptosis regulator
<a href="#">Details</a>	761	61	hsa-miR-1271-5p	<a href="#">EDEM3</a>	ER degradation enhancing alpha-mannosidase like protein 3
<a href="#">Details</a>	762	61	hsa-miR-1271-5p	<a href="#">SLC16A13</a>	solute carrier family 16 member 13
<a href="#">Details</a>	763	61	hsa-miR-1271-5p	<a href="#">CCDC88C</a>	coiled-coil domain containing 88C
<a href="#">Details</a>	764	61	hsa-miR-1271-5p	<a href="#">SLC44A1</a>	solute carrier family 44 member 1
<a href="#">Details</a>	765	61	hsa-miR-1271-5p	<a href="#">MINDY3</a>	MINDY lysine 48 deubiquitinase 3
<a href="#">Details</a>	766	60	hsa-miR-1271-5p	<a href="#">RNF208</a>	ring finger protein 208
<a href="#">Details</a>	767	60	hsa-miR-1271-5p	<a href="#">ZIC3</a>	Zic family member 3
<a href="#">Details</a>	768	60	hsa-miR-1271-5p	<a href="#">TBC1D4</a>	TBC1 domain family member 4
<a href="#">Details</a>	769	60	hsa-miR-1271-5p	<a href="#">MECOM</a>	MDS1 and EVI1 complex locus
<a href="#">Details</a>	770	60	hsa-miR-1271-5p	<a href="#">VIPR1</a>	vasoactive intestinal peptide receptor 1
<a href="#">Details</a>	771	60	hsa-miR-1271-5p	<a href="#">CCNG1</a>	cyclin G1
<a href="#">Details</a>	772	60	hsa-miR-1271-5p	<a href="#">ITBK2</a>	tau tubulin kinase 2
<a href="#">Details</a>	773	60	hsa-miR-1271-5p	<a href="#">C18orf54</a>	chromosome 18 open reading frame 54
<a href="#">Details</a>	774	60	hsa-miR-1271-5p	<a href="#">GSTM2</a>	glutathione S-transferase mu 2
<a href="#">Details</a>	775	60	hsa-miR-1271-5p	<a href="#">RIMBP2</a>	RIMS binding protein 2
<a href="#">Details</a>	776	60	hsa-miR-1271-5p	<a href="#">MARCH3</a>	membrane associated ring-CH-type finger 3
<a href="#">Details</a>	777	60	hsa-miR-1271-5p	<a href="#">CYYR1</a>	cysteine and tyrosine rich 1
<a href="#">Details</a>	778	60	hsa-miR-1271-5p	<a href="#">SRSF6</a>	serine and arginine rich splicing factor 6
<a href="#">Details</a>	779	60	hsa-miR-1271-5p	<a href="#">FLOT1</a>	flotillin 1
<a href="#">Details</a>	780	60	hsa-miR-1271-5p	<a href="#">RUFY1</a>	RUN and FYVE domain containing 1
<a href="#">Details</a>	781	60	hsa-miR-1271-5p	<a href="#">SLC35G1</a>	solute carrier family 35 member G1
<a href="#">Details</a>	782	60	hsa-miR-1271-5p	<a href="#">ZNRF1</a>	zinc and ring finger 1
<a href="#">Details</a>	783	60	hsa-miR-1271-5p	<a href="#">TMX1</a>	thioredoxin related transmembrane protein 1
<a href="#">Details</a>	784	60	hsa-miR-1271-5p	<a href="#">CD1D</a>	CD1d molecule
<a href="#">Details</a>	785	60	hsa-miR-1271-5p	<a href="#">COL9A1</a>	collagen type IX alpha 1 chain
<a href="#">Details</a>	786	60	hsa-miR-1271-5p	<a href="#">PDE6C</a>	phosphodiesterase 6C
<a href="#">Details</a>	787	60	hsa-miR-1271-5p	<a href="#">PCMTD1</a>	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 1
<a href="#">Details</a>	788	60	hsa-miR-1271-5p	<a href="#">MTX3</a>	metaxin 3
<a href="#">Details</a>	789	60	hsa-miR-1271-5p	<a href="#">AP4E1</a>	adaptor related protein complex 4 subunit epsilon 1
<a href="#">Details</a>	790	60	hsa-miR-1271-5p	<a href="#">RANBP6</a>	RAN binding protein 6
<a href="#">Details</a>	791	60	hsa-miR-1271-5p	<a href="#">ADAM22</a>	ADAM metallopeptidase domain 22
<a href="#">Details</a>	792	59	hsa-miR-1271-5p	<a href="#">PAQR8</a>	progesterin and adipoQ receptor family member 8
<a href="#">Details</a>	793	59	hsa-miR-1271-5p	<a href="#">TSPAN9</a>	tetraspanin 9
<a href="#">Details</a>	794	59	hsa-miR-1271-5p	<a href="#">SKIL</a>	SKI like proto-oncogene
<a href="#">Details</a>	795	59	hsa-miR-1271-5p	<a href="#">CSNK1D</a>	casein kinase 1 delta
<a href="#">Details</a>	796	59	hsa-miR-1271-5p	<a href="#">COL4A6</a>	collagen type IV alpha 6 chain

<a href="#">Details</a>	797	59	hsa-miR-1271-5p	<a href="#">VLDLR</a>	very low density lipoprotein receptor
<a href="#">Details</a>	798	59	hsa-miR-1271-5p	<a href="#">CNNM2</a>	cyclin and CBS domain divalent metal cation transport mediator 2
<a href="#">Details</a>	799	59	hsa-miR-1271-5p	<a href="#">PPP1R12A</a>	protein phosphatase 1 regulatory subunit 12A
<a href="#">Details</a>	800	59	hsa-miR-1271-5p	<a href="#">CALHM4</a>	calcium homeostasis modulator family member 4
<a href="#">Details</a>	801	59	hsa-miR-1271-5p	<a href="#">SLC39A10</a>	solute carrier family 39 member 10
<a href="#">Details</a>	802	59	hsa-miR-1271-5p	<a href="#">TMEM178B</a>	transmembrane protein 178B
<a href="#">Details</a>	803	59	hsa-miR-1271-5p	<a href="#">PCDH8</a>	protocadherin 8
<a href="#">Details</a>	804	59	hsa-miR-1271-5p	<a href="#">TMEM150C</a>	transmembrane protein 150C
<a href="#">Details</a>	805	59	hsa-miR-1271-5p	<a href="#">ANKRD44</a>	ankyrin repeat domain 44
<a href="#">Details</a>	806	59	hsa-miR-1271-5p	<a href="#">SLC25A16</a>	solute carrier family 25 member 16
<a href="#">Details</a>	807	59	hsa-miR-1271-5p	<a href="#">TTC39A</a>	tetratricopeptide repeat domain 39A
<a href="#">Details</a>	808	58	hsa-miR-1271-5p	<a href="#">RAD51B</a>	RAD51 paralog B
<a href="#">Details</a>	809	58	hsa-miR-1271-5p	<a href="#">RETREG1</a>	reticulophagy regulator 1
<a href="#">Details</a>	810	58	hsa-miR-1271-5p	<a href="#">ZNF585B</a>	zinc finger protein 585B
<a href="#">Details</a>	811	58	hsa-miR-1271-5p	<a href="#">ZNF91</a>	zinc finger protein 91
<a href="#">Details</a>	812	58	hsa-miR-1271-5p	<a href="#">CNTNAP2</a>	contactin associated protein like 2
<a href="#">Details</a>	813	58	hsa-miR-1271-5p	<a href="#">DENR</a>	density regulated re-initiation and release factor
<a href="#">Details</a>	814	58	hsa-miR-1271-5p	<a href="#">MAP3K20</a>	mitogen-activated protein kinase kinase 20
<a href="#">Details</a>	815	58	hsa-miR-1271-5p	<a href="#">CNOT6</a>	CCR4-NOT transcription complex subunit 6
<a href="#">Details</a>	816	58	hsa-miR-1271-5p	<a href="#">RGS5</a>	regulator of G protein signaling 5
<a href="#">Details</a>	817	58	hsa-miR-1271-5p	<a href="#">MBD4</a>	methyl-CpG binding domain 4, DNA glycosylase
<a href="#">Details</a>	818	58	hsa-miR-1271-5p	<a href="#">CD59</a>	CD59 molecule (CD59 blood group)
<a href="#">Details</a>	819	58	hsa-miR-1271-5p	<a href="#">MMAB</a>	metabolism of cobalamin associated B
<a href="#">Details</a>	820	58	hsa-miR-1271-5p	<a href="#">SH3BGRL2</a>	SH3 domain binding glutamate rich protein like 2
<a href="#">Details</a>	821	58	hsa-miR-1271-5p	<a href="#">RIMS4</a>	regulating synaptic membrane exocytosis 4
<a href="#">Details</a>	822	58	hsa-miR-1271-5p	<a href="#">SNX17</a>	sorting nexin 17
<a href="#">Details</a>	823	58	hsa-miR-1271-5p	<a href="#">UBE2K</a>	ubiquitin conjugating enzyme E2 K
<a href="#">Details</a>	824	57	hsa-miR-1271-5p	<a href="#">CACNA1G</a>	calcium voltage-gated channel subunit alpha1 G
<a href="#">Details</a>	825	57	hsa-miR-1271-5p	<a href="#">SCN9A</a>	sodium voltage-gated channel alpha subunit 9
<a href="#">Details</a>	826	57	hsa-miR-1271-5p	<a href="#">FOXN3</a>	forkhead box N3
<a href="#">Details</a>	827	57	hsa-miR-1271-5p	<a href="#">CDC42BPA</a>	CDC42 binding protein kinase alpha
<a href="#">Details</a>	828	57	hsa-miR-1271-5p	<a href="#">FAM126B</a>	family with sequence similarity 126 member B
<a href="#">Details</a>	829	57	hsa-miR-1271-5p	<a href="#">EPM2AIP1</a>	EPM2A interacting protein 1
<a href="#">Details</a>	830	57	hsa-miR-1271-5p	<a href="#">CRTS3</a>	CREB regulated transcription coactivator 3
<a href="#">Details</a>	831	57	hsa-miR-1271-5p	<a href="#">JAKMIP2</a>	janus kinase and microtubule interacting protein 2
<a href="#">Details</a>	832	57	hsa-miR-1271-5p	<a href="#">OPN1MW</a>	opsin 1, medium wave sensitive
<a href="#">Details</a>	833	57	hsa-miR-1271-5p	<a href="#">CCDC88A</a>	coiled-coil domain containing 88A
<a href="#">Details</a>	834	57	hsa-miR-1271-5p	<a href="#">FUT9</a>	fucosyltransferase 9
<a href="#">Details</a>	835	57	hsa-miR-1271-5p	<a href="#">THSD7A</a>	thrombospondin type 1 domain containing 7A
<a href="#">Details</a>	836	57	hsa-miR-1271-5p	<a href="#">PDE1A</a>	phosphodiesterase 1A
<a href="#">Details</a>	837	57	hsa-miR-1271-5p	<a href="#">CPSF7</a>	cleavage and polyadenylation specific factor 7
<a href="#">Details</a>	838	57	hsa-miR-1271-5p	<a href="#">SNX7</a>	sorting nexin 7
<a href="#">Details</a>	839	57	hsa-miR-1271-5p	<a href="#">ZNF24</a>	zinc finger protein 24
<a href="#">Details</a>	840	57	hsa-miR-1271-5p	<a href="#">STRBP</a>	spermatid perinuclear RNA binding protein
<a href="#">Details</a>	841	57	hsa-miR-1271-5p	<a href="#">NR3C1</a>	nuclear receptor subfamily 3 group C member

					1
<a href="#">Details</a>	842	57	hsa-miR-1271-5p	<a href="#">CABLES1</a>	Cdk5 and Abl enzyme substrate 1
<a href="#">Details</a>	843	57	hsa-miR-1271-5p	<a href="#">NOX4</a>	NADPH oxidase 4
<a href="#">Details</a>	844	57	hsa-miR-1271-5p	<a href="#">BACH2</a>	BTB domain and CNC homolog 2
<a href="#">Details</a>	845	57	hsa-miR-1271-5p	<a href="#">SIKE1</a>	suppressor of IKBKE 1
<a href="#">Details</a>	846	57	hsa-miR-1271-5p	<a href="#">PTPN4</a>	protein tyrosine phosphatase, non-receptor type 4
<a href="#">Details</a>	847	57	hsa-miR-1271-5p	<a href="#">CDYL2</a>	chromodomain Y like 2
<a href="#">Details</a>	848	57	hsa-miR-1271-5p	<a href="#">KDELR1</a>	KDEL endoplasmic reticulum protein retention receptor 1
<a href="#">Details</a>	849	56	hsa-miR-1271-5p	<a href="#">RNF217</a>	ring finger protein 217
<a href="#">Details</a>	850	56	hsa-miR-1271-5p	<a href="#">ARFGEF3</a>	ARFGEF family member 3
<a href="#">Details</a>	851	56	hsa-miR-1271-5p	<a href="#">SLC1A2</a>	solute carrier family 1 member 2
<a href="#">Details</a>	852	56	hsa-miR-1271-5p	<a href="#">CCND1</a>	cyclin D1
<a href="#">Details</a>	853	56	hsa-miR-1271-5p	<a href="#">ASB5</a>	ankyrin repeat and SOCS box containing 5
<a href="#">Details</a>	854	56	hsa-miR-1271-5p	<a href="#">RNLS</a>	renalase, FAD dependent amine oxidase
<a href="#">Details</a>	855	56	hsa-miR-1271-5p	<a href="#">MAMLD1</a>	mastermind like domain containing 1
<a href="#">Details</a>	856	56	hsa-miR-1271-5p	<a href="#">TRPC5</a>	transient receptor potential cation channel subfamily C member 5
<a href="#">Details</a>	857	56	hsa-miR-1271-5p	<a href="#">CD2AP</a>	CD2 associated protein
<a href="#">Details</a>	858	56	hsa-miR-1271-5p	<a href="#">SLC35C1</a>	solute carrier family 35 member C1
<a href="#">Details</a>	859	56	hsa-miR-1271-5p	<a href="#">ZNF175</a>	zinc finger protein 175
<a href="#">Details</a>	860	56	hsa-miR-1271-5p	<a href="#">ZNF268</a>	zinc finger protein 268
<a href="#">Details</a>	861	56	hsa-miR-1271-5p	<a href="#">TNFSF8</a>	TNF superfamily member 8
<a href="#">Details</a>	862	56	hsa-miR-1271-5p	<a href="#">GRK6</a>	G protein-coupled receptor kinase 6
<a href="#">Details</a>	863	56	hsa-miR-1271-5p	<a href="#">SH3BGRL3</a>	SH3 domain binding glutamate rich protein like 3
<a href="#">Details</a>	864	56	hsa-miR-1271-5p	<a href="#">PPP1R13L</a>	protein phosphatase 1 regulatory subunit 13 like
<a href="#">Details</a>	865	56	hsa-miR-1271-5p	<a href="#">NSG2</a>	neuronal vesicle trafficking associated 2
<a href="#">Details</a>	866	56	hsa-miR-1271-5p	<a href="#">DBT</a>	dihydrolipoamide branched chain transacylase E2
<a href="#">Details</a>	867	55	hsa-miR-1271-5p	<a href="#">MGST2</a>	microsomal glutathione S-transferase 2
<a href="#">Details</a>	868	55	hsa-miR-1271-5p	<a href="#">CBLN4</a>	cerebellin 4 precursor
<a href="#">Details</a>	869	55	hsa-miR-1271-5p	<a href="#">H6PD</a>	hexose-6-phosphate dehydrogenase/glucose 1-dehydrogenase
<a href="#">Details</a>	870	55	hsa-miR-1271-5p	<a href="#">MOSPD2</a>	motile sperm domain containing 2
<a href="#">Details</a>	871	55	hsa-miR-1271-5p	<a href="#">FHL5</a>	four and a half LIM domains 5
<a href="#">Details</a>	872	55	hsa-miR-1271-5p	<a href="#">NCAM1</a>	neural cell adhesion molecule 1
<a href="#">Details</a>	873	55	hsa-miR-1271-5p	<a href="#">EEA1</a>	early endosome antigen 1
<a href="#">Details</a>	874	55	hsa-miR-1271-5p	<a href="#">ZNF697</a>	zinc finger protein 697
<a href="#">Details</a>	875	55	hsa-miR-1271-5p	<a href="#">MIER2</a>	MIER family member 2
<a href="#">Details</a>	876	55	hsa-miR-1271-5p	<a href="#">TMEM164</a>	transmembrane protein 164
<a href="#">Details</a>	877	55	hsa-miR-1271-5p	<a href="#">ACER2</a>	alkaline ceramidase 2
<a href="#">Details</a>	878	55	hsa-miR-1271-5p	<a href="#">KAT7</a>	lysine acetyltransferase 7
<a href="#">Details</a>	879	55	hsa-miR-1271-5p	<a href="#">HTRA4</a>	HtrA serine peptidase 4
<a href="#">Details</a>	880	55	hsa-miR-1271-5p	<a href="#">CMTR1</a>	cap methyltransferase 1
<a href="#">Details</a>	881	55	hsa-miR-1271-5p	<a href="#">LDB2</a>	LIM domain binding 2
<a href="#">Details</a>	882	55	hsa-miR-1271-5p	<a href="#">PTPRG</a>	protein tyrosine phosphatase, receptor type G
<a href="#">Details</a>	883	55	hsa-miR-1271-5p	<a href="#">RBPM5</a>	RNA binding protein, mRNA processing factor
<a href="#">Details</a>	884	55	hsa-miR-1271-5p	<a href="#">NT5DC3</a>	5'-nucleotidase domain containing 3
<a href="#">Details</a>	885	55	hsa-miR-1271-5p	<a href="#">IGSF3</a>	immunoglobulin superfamily member 3

<a href="#">Details</a>	886	54	hsa-miR-1271-5p	<a href="#">FAM124A</a>	family with sequence similarity 124 member A
<a href="#">Details</a>	887	54	hsa-miR-1271-5p	<a href="#">ELL2</a>	elongation factor for RNA polymerase II 2
<a href="#">Details</a>	888	54	hsa-miR-1271-5p	<a href="#">CCNG2</a>	cyclin G2
<a href="#">Details</a>	889	54	hsa-miR-1271-5p	<a href="#">DEXI</a>	Dexi homolog
<a href="#">Details</a>	890	54	hsa-miR-1271-5p	<a href="#">TWSG1</a>	twisted gastrulation BMP signaling modulator 1
<a href="#">Details</a>	891	54	hsa-miR-1271-5p	<a href="#">TNS1</a>	tensin 1
<a href="#">Details</a>	892	54	hsa-miR-1271-5p	<a href="#">B3GALT2</a>	beta-1,3-galactosyltransferase 2
<a href="#">Details</a>	893	54	hsa-miR-1271-5p	<a href="#">PRKACB</a>	protein kinase cAMP-activated catalytic subunit beta
<a href="#">Details</a>	894	54	hsa-miR-1271-5p	<a href="#">JAKMP</a>	JNK1/MAPK8 associated membrane protein
<a href="#">Details</a>	895	54	hsa-miR-1271-5p	<a href="#">KCNJ2</a>	potassium voltage-gated channel subfamily J member 2
<a href="#">Details</a>	896	54	hsa-miR-1271-5p	<a href="#">BHLHE22</a>	basic helix-loop-helix family member e22
<a href="#">Details</a>	897	54	hsa-miR-1271-5p	<a href="#">RAB40B</a>	RAB40B, member RAS oncogene family
<a href="#">Details</a>	898	54	hsa-miR-1271-5p	<a href="#">C12orf60</a>	chromosome 12 open reading frame 60
<a href="#">Details</a>	899	54	hsa-miR-1271-5p	<a href="#">ATF7IP</a>	activating transcription factor 7 interacting protein
<a href="#">Details</a>	900	54	hsa-miR-1271-5p	<a href="#">MACO1</a>	macoilin 1
<a href="#">Details</a>	901	54	hsa-miR-1271-5p	<a href="#">A1CF</a>	APOBEC1 complementation factor
<a href="#">Details</a>	902	54	hsa-miR-1271-5p	<a href="#">TIMP4</a>	TIMP metallopeptidase inhibitor 4
<a href="#">Details</a>	903	54	hsa-miR-1271-5p	<a href="#">SLC6A6</a>	solute carrier family 6 member 6
<a href="#">Details</a>	904	54	hsa-miR-1271-5p	<a href="#">TOP3A</a>	DNA topoisomerase III alpha
<a href="#">Details</a>	905	54	hsa-miR-1271-5p	<a href="#">SOX10</a>	SRY-box 10
<a href="#">Details</a>	906	54	hsa-miR-1271-5p	<a href="#">ANO5</a>	anoctamin 5
<a href="#">Details</a>	907	54	hsa-miR-1271-5p	<a href="#">ASPN</a>	asporin
<a href="#">Details</a>	908	54	hsa-miR-1271-5p	<a href="#">KHSRP</a>	KH-type splicing regulatory protein
<a href="#">Details</a>	909	54	hsa-miR-1271-5p	<a href="#">F13A1</a>	coagulation factor XIII A chain
<a href="#">Details</a>	910	54	hsa-miR-1271-5p	<a href="#">ZNF480</a>	zinc finger protein 480
<a href="#">Details</a>	911	54	hsa-miR-1271-5p	<a href="#">PHF21B</a>	PHD finger protein 21B
<a href="#">Details</a>	912	54	hsa-miR-1271-5p	<a href="#">CCND2</a>	cyclin D2
<a href="#">Details</a>	913	54	hsa-miR-1271-5p	<a href="#">AREL1</a>	apoptosis resistant E3 ubiquitin protein ligase 1
<a href="#">Details</a>	914	54	hsa-miR-1271-5p	<a href="#">RAD51</a>	RAD51 recombinase
<a href="#">Details</a>	915	53	hsa-miR-1271-5p	<a href="#">DNAJB8</a>	DnaJ heat shock protein family (Hsp40) member B8
<a href="#">Details</a>	916	53	hsa-miR-1271-5p	<a href="#">RASA2</a>	RAS p21 protein activator 2
<a href="#">Details</a>	917	53	hsa-miR-1271-5p	<a href="#">POU2F3</a>	POU class 2 homeobox 3
<a href="#">Details</a>	918	53	hsa-miR-1271-5p	<a href="#">PCDHA8</a>	protocadherin alpha 8
<a href="#">Details</a>	919	53	hsa-miR-1271-5p	<a href="#">PCDHAC1</a>	protocadherin alpha subfamily C, 1
<a href="#">Details</a>	920	53	hsa-miR-1271-5p	<a href="#">EPB41L2</a>	erythrocyte membrane protein band 4.1 like 2
<a href="#">Details</a>	921	53	hsa-miR-1271-5p	<a href="#">SYBU</a>	syntabulin
<a href="#">Details</a>	922	53	hsa-miR-1271-5p	<a href="#">MBNL2</a>	muscleblind like splicing regulator 2
<a href="#">Details</a>	923	53	hsa-miR-1271-5p	<a href="#">PCDHAC2</a>	protocadherin alpha subfamily C, 2
<a href="#">Details</a>	924	53	hsa-miR-1271-5p	<a href="#">PCDHA13</a>	protocadherin alpha 13
<a href="#">Details</a>	925	53	hsa-miR-1271-5p	<a href="#">BOD1L1</a>	biorientation of chromosomes in cell division 1 like 1
<a href="#">Details</a>	926	53	hsa-miR-1271-5p	<a href="#">FOXP1</a>	forkhead box P1
<a href="#">Details</a>	927	53	hsa-miR-1271-5p	<a href="#">HES1</a>	hes family bHLH transcription factor 1
<a href="#">Details</a>	928	53	hsa-miR-1271-5p	<a href="#">PCDHA10</a>	protocadherin alpha 10
<a href="#">Details</a>	929	53	hsa-miR-1271-5p	<a href="#">PCDHA5</a>	protocadherin alpha 5
<a href="#">Details</a>	930	53	hsa-miR-1271-5p	<a href="#">GRID2</a>	glutamate ionotropic receptor delta type subunit 2

<a href="#">Details</a>	931	53	hsa-miR-1271-5p	<a href="#">FUCA2</a>	alpha-L-fucosidase 2
<a href="#">Details</a>	932	53	hsa-miR-1271-5p	<a href="#">MAP1A</a>	microtubule associated protein 1A
<a href="#">Details</a>	933	53	hsa-miR-1271-5p	<a href="#">PCDHA6</a>	protocadherin alpha 6
<a href="#">Details</a>	934	53	hsa-miR-1271-5p	<a href="#">DYRK2</a>	dual specificity tyrosine phosphorylation regulated kinase 2
<a href="#">Details</a>	935	53	hsa-miR-1271-5p	<a href="#">PCDHA11</a>	protocadherin alpha 11
<a href="#">Details</a>	936	53	hsa-miR-1271-5p	<a href="#">GRM5</a>	glutamate metabotropic receptor 5
<a href="#">Details</a>	937	53	hsa-miR-1271-5p	<a href="#">PCDHA3</a>	protocadherin alpha 3
<a href="#">Details</a>	938	53	hsa-miR-1271-5p	<a href="#">CBX6</a>	chromobox 6
<a href="#">Details</a>	939	53	hsa-miR-1271-5p	<a href="#">FEV</a>	FEV, ETS transcription factor
<a href="#">Details</a>	940	53	hsa-miR-1271-5p	<a href="#">RABIF</a>	RAB interacting factor
<a href="#">Details</a>	941	53	hsa-miR-1271-5p	<a href="#">PCDHA4</a>	protocadherin alpha 4
<a href="#">Details</a>	942	53	hsa-miR-1271-5p	<a href="#">DERL3</a>	derlin 3
<a href="#">Details</a>	943	53	hsa-miR-1271-5p	<a href="#">PCDHA1</a>	protocadherin alpha 1
<a href="#">Details</a>	944	53	hsa-miR-1271-5p	<a href="#">CHMP1B</a>	charged multivesicular body protein 1B
<a href="#">Details</a>	945	53	hsa-miR-1271-5p	<a href="#">PCDHA7</a>	protocadherin alpha 7
<a href="#">Details</a>	946	53	hsa-miR-1271-5p	<a href="#">RAVER2</a>	ribonucleoprotein, PTB binding 2
<a href="#">Details</a>	947	53	hsa-miR-1271-5p	<a href="#">PCDHA2</a>	protocadherin alpha 2
<a href="#">Details</a>	948	53	hsa-miR-1271-5p	<a href="#">TRIM71</a>	tripartite motif containing 71
<a href="#">Details</a>	949	53	hsa-miR-1271-5p	<a href="#">PCDHA12</a>	protocadherin alpha 12
<a href="#">Details</a>	950	53	hsa-miR-1271-5p	<a href="#">ARID4A</a>	AT-rich interaction domain 4A
<a href="#">Details</a>	951	52	hsa-miR-1271-5p	<a href="#">TMOD1</a>	tropomodulin 1
<a href="#">Details</a>	952	52	hsa-miR-1271-5p	<a href="#">EDNRA</a>	endothelin receptor type A
<a href="#">Details</a>	953	52	hsa-miR-1271-5p	<a href="#">SYPL2</a>	synaptophysin like 2
<a href="#">Details</a>	954	52	hsa-miR-1271-5p	<a href="#">CHMP1A</a>	charged multivesicular body protein 1A
<a href="#">Details</a>	955	52	hsa-miR-1271-5p	<a href="#">EFNA5</a>	ephrin A5
<a href="#">Details</a>	956	52	hsa-miR-1271-5p	<a href="#">RAP1GAP2</a>	RAP1 GTPase activating protein 2
<a href="#">Details</a>	957	52	hsa-miR-1271-5p	<a href="#">SH3BGRL</a>	SH3 domain binding glutamate rich protein like
<a href="#">Details</a>	958	52	hsa-miR-1271-5p	<a href="#">SLC2A14</a>	solute carrier family 2 member 14
<a href="#">Details</a>	959	52	hsa-miR-1271-5p	<a href="#">CCDC92</a>	coiled-coil domain containing 92
<a href="#">Details</a>	960	52	hsa-miR-1271-5p	<a href="#">DENND1A</a>	DENN domain containing 1A
<a href="#">Details</a>	961	52	hsa-miR-1271-5p	<a href="#">PCDHA9</a>	protocadherin alpha 9
<a href="#">Details</a>	962	52	hsa-miR-1271-5p	<a href="#">SYNM</a>	synemin
<a href="#">Details</a>	963	52	hsa-miR-1271-5p	<a href="#">PET117</a>	PET117 homolog
<a href="#">Details</a>	964	52	hsa-miR-1271-5p	<a href="#">MAL2</a>	mal, T cell differentiation protein 2 (gene/pseudogene)
<a href="#">Details</a>	965	52	hsa-miR-1271-5p	<a href="#">CCNY</a>	cyclin Y
<a href="#">Details</a>	966	52	hsa-miR-1271-5p	<a href="#">KLF13</a>	Kruppel like factor 13
<a href="#">Details</a>	967	52	hsa-miR-1271-5p	<a href="#">INPP5D</a>	inositol polyphosphate-5-phosphatase D
<a href="#">Details</a>	968	52	hsa-miR-1271-5p	<a href="#">MYO1D</a>	myosin ID
<a href="#">Details</a>	969	52	hsa-miR-1271-5p	<a href="#">TP73</a>	tumor protein p73
<a href="#">Details</a>	970	52	hsa-miR-1271-5p	<a href="#">SLC25A25</a>	solute carrier family 25 member 25
<a href="#">Details</a>	971	52	hsa-miR-1271-5p	<a href="#">JMJD6</a>	jumonji domain containing 6, arginine demethylase and lysine hydroxylase
<a href="#">Details</a>	972	51	hsa-miR-1271-5p	<a href="#">FIGN</a>	fidgetin, microtubule severing factor
<a href="#">Details</a>	973	51	hsa-miR-1271-5p	<a href="#">B3GALT1</a>	beta-1,3-galactosyltransferase 1
<a href="#">Details</a>	974	51	hsa-miR-1271-5p	<a href="#">GNG12</a>	G protein subunit gamma 12
<a href="#">Details</a>	975	51	hsa-miR-1271-5p	<a href="#">MYSM1</a>	Myb like, SWIRM and MPN domains 1
<a href="#">Details</a>	976	51	hsa-miR-1271-5p	<a href="#">CPEB4</a>	cytoplasmic polyadenylation element binding protein 4
<a href="#">Details</a>	977	51	hsa-miR-1271-5p	<a href="#">LRP3</a>	LDL receptor related protein 3

<a href="#">Details</a>	978	51	hsa-miR-1271-5p	<a href="#">GGA2</a>	golgi associated, gamma adaptin ear containing, ARF binding protein 2
<a href="#">Details</a>	979	51	hsa-miR-1271-5p	<a href="#">PAIP2</a>	poly(A) binding protein interacting protein 2
<a href="#">Details</a>	980	51	hsa-miR-1271-5p	<a href="#">C5orf30</a>	chromosome 5 open reading frame 30
<a href="#">Details</a>	981	51	hsa-miR-1271-5p	<a href="#">TMEM260</a>	transmembrane protein 260
<a href="#">Details</a>	982	51	hsa-miR-1271-5p	<a href="#">HIF1AN</a>	hypoxia inducible factor 1 subunit alpha inhibitor
<a href="#">Details</a>	983	51	hsa-miR-1271-5p	<a href="#">MTR</a>	5-methyltetrahydrofolate-homocysteine methyltransferase
<a href="#">Details</a>	984	51	hsa-miR-1271-5p	<a href="#">ADAM18</a>	ADAM metallopeptidase domain 18
<a href="#">Details</a>	985	51	hsa-miR-1271-5p	<a href="#">ATG7</a>	autophagy related 7
<a href="#">Details</a>	986	51	hsa-miR-1271-5p	<a href="#">UBE2QL1</a>	ubiquitin conjugating enzyme E2 Q family like 1
<a href="#">Details</a>	987	51	hsa-miR-1271-5p	<a href="#">ELMO2</a>	engulfment and cell motility 2
<a href="#">Details</a>	988	51	hsa-miR-1271-5p	<a href="#">MYO5B</a>	myosin VB
<a href="#">Details</a>	989	51	hsa-miR-1271-5p	<a href="#">OXR1</a>	oxidation resistance 1
<a href="#">Details</a>	990	51	hsa-miR-1271-5p	<a href="#">CNOT9</a>	CCR4-NOT transcription complex subunit 9
<a href="#">Details</a>	991	50	hsa-miR-1271-5p	<a href="#">DCLRE1B</a>	DNA cross-link repair 1B
<a href="#">Details</a>	992	50	hsa-miR-1271-5p	<a href="#">ZNF765</a>	zinc finger protein 765
<a href="#">Details</a>	993	50	hsa-miR-1271-5p	<a href="#">KHDC4</a>	KH domain containing 4, pre-mRNA splicing factor
<a href="#">Details</a>	994	50	hsa-miR-1271-5p	<a href="#">MAST3</a>	microtubule associated serine/threonine kinase 3
<a href="#">Details</a>	995	50	hsa-miR-1271-5p	<a href="#">ZNF577</a>	zinc finger protein 577
<a href="#">Details</a>	996	50	hsa-miR-1271-5p	<a href="#">VPS26B</a>	VPS26, retromer complex component B
<a href="#">Details</a>	997	50	hsa-miR-1271-5p	<a href="#">RDH5</a>	retinol dehydrogenase 5
<a href="#">Details</a>	998	50	hsa-miR-1271-5p	<a href="#">ARHGEF38</a>	Rho guanine nucleotide exchange factor 38
<a href="#">Details</a>	999	50	hsa-miR-1271-5p	<a href="#">ARL4C</a>	ADP ribosylation factor like GTPase 4C
<a href="#">Details</a>	1000	50	hsa-miR-1271-5p	<a href="#">RPRD1B</a>	regulation of nuclear pre-mRNA domain containing 1B
<a href="#">Details</a>	1001	50	hsa-miR-1271-5p	<a href="#">TUFM</a>	Tu translation elongation factor, mitochondrial
<a href="#">Details</a>	1002	50	hsa-miR-1271-5p	<a href="#">EBF1</a>	EBF transcription factor 1
<a href="#">Details</a>	1003	50	hsa-miR-1271-5p	<a href="#">DISC1</a>	DISC1 scaffold protein
<a href="#">Details</a>	1004	50	hsa-miR-1271-5p	<a href="#">STN1</a>	STN1, CST complex subunit
<a href="#">Details</a>	1005	50	hsa-miR-1271-5p	<a href="#">DGKH</a>	diacylglycerol kinase eta
<a href="#">Details</a>	1006	50	hsa-miR-1271-5p	<a href="#">KMT2A</a>	lysine methyltransferase 2A

## Supplementary Information 2



**There are 1101 predicted targets for hsa-miR-96-5p in miRDB.**

Target Detail	Target Rank	Target Score	miRNA Name	Gene Symbol	Gene Description
<a href="#">Details</a>	1	100	hsa-miR-96-5p	<a href="#">NEXMIF</a>	neurite extension and migration factor
<a href="#">Details</a>	2	100	hsa-miR-96-5p	<a href="#">ADCY6</a>	adenylate cyclase 6
<a href="#">Details</a>	3	100	hsa-miR-96-5p	<a href="#">PRTG</a>	protoxinogenin
<a href="#">Details</a>	4	100	hsa-miR-96-5p	<a href="#">SPIN1</a>	spindlin 1
<a href="#">Details</a>	5	100	hsa-miR-96-5p	<a href="#">FRS2</a>	fibroblast growth factor receptor substrate 2
<a href="#">Details</a>	6	100	hsa-miR-96-5p	<a href="#">LRCH2</a>	leucine rich repeats and calponin homology domain containing 2
<a href="#">Details</a>	7	100	hsa-miR-96-5p	<a href="#">HAS2</a>	hyaluronan synthase 2
<a href="#">Details</a>	8	99	hsa-miR-96-5p	<a href="#">SH3BP5</a>	SH3 domain binding protein 5
<a href="#">Details</a>	9	99	hsa-miR-96-5p	<a href="#">BRPF3</a>	bromodomain and PHD finger containing 3
<a href="#">Details</a>	10	99	hsa-miR-96-5p	<a href="#">JMD1C</a>	jumonji domain containing 1C
<a href="#">Details</a>	11	99	hsa-miR-96-5p	<a href="#">SNX30</a>	sorting nexin family member 30
<a href="#">Details</a>	12	99	hsa-miR-96-5p	<a href="#">ATXN1</a>	ataxin 1
<a href="#">Details</a>	13	99	hsa-miR-96-5p	<a href="#">ITPR1</a>	inositol 1,4,5-trisphosphate receptor type 1
<a href="#">Details</a>	14	99	hsa-miR-96-5p	<a href="#">TBR1</a>	T-box, brain 1
<a href="#">Details</a>	15	99	hsa-miR-96-5p	<a href="#">PLPPR4</a>	phospholipid phosphatase related 4
<a href="#">Details</a>	16	99	hsa-miR-96-5p	<a href="#">OXR1</a>	oxidative stress responsive kinase 1
<a href="#">Details</a>	17	99	hsa-miR-96-5p	<a href="#">MTSS1</a>	MTSS1, I-BAR domain containing
<a href="#">Details</a>	18	99	hsa-miR-96-5p	<a href="#">SLC1A1</a>	solute carrier family 1 member 1
<a href="#">Details</a>	19	99	hsa-miR-96-5p	<a href="#">COL25A1</a>	collagen type XXV alpha 1 chain
<a href="#">Details</a>	20	99	hsa-miR-96-5p	<a href="#">UBE2G1</a>	ubiquitin conjugating enzyme E2 G1
<a href="#">Details</a>	21	98	hsa-miR-96-5p	<a href="#">B4GALNT1</a>	beta-1,4-N-acetyl-galactosaminyltransferase 1
<a href="#">Details</a>	22	98	hsa-miR-96-5p	<a href="#">MED1</a>	mediator complex subunit 1
<a href="#">Details</a>	23	98	hsa-miR-96-5p	<a href="#">PHF20L1</a>	PHD finger protein 20 like 1
<a href="#">Details</a>	24	98	hsa-miR-96-5p	<a href="#">KLHL34</a>	kelch like family member 34
<a href="#">Details</a>	25	98	hsa-miR-96-5p	<a href="#">VAMP3</a>	vesicle associated membrane protein 3
<a href="#">Details</a>	26	98	hsa-miR-96-5p	<a href="#">SLAIN2</a>	SLAIN motif family member 2
<a href="#">Details</a>	27	98	hsa-miR-96-5p	<a href="#">PHP</a>	pleckstrin homology domain interacting protein
<a href="#">Details</a>	28	98	hsa-miR-96-5p	<a href="#">RAB8B</a>	RAB8B, member RAS oncogene family
<a href="#">Details</a>	29	98	hsa-miR-96-5p	<a href="#">CTTN</a>	cortactin
<a href="#">Details</a>	30	98	hsa-miR-96-5p	<a href="#">E2F5</a>	E2F transcription factor 5
<a href="#">Details</a>	31	98	hsa-miR-96-5p	<a href="#">SOX6</a>	SRY-box 6
<a href="#">Details</a>	32	98	hsa-miR-96-5p	<a href="#">ZFP36L1</a>	ZFP36 ring finger protein like 1
<a href="#">Details</a>	33	98	hsa-miR-96-5p	<a href="#">SIN3B</a>	SIN3 transcription regulator family member B
<a href="#">Details</a>	34	97	hsa-miR-96-5p	<a href="#">ZCCHC3</a>	zinc finger CCHC-type containing 3
<a href="#">Details</a>	35	97	hsa-miR-96-5p	<a href="#">HOOK3</a>	hook microtubule tethering protein 3
<a href="#">Details</a>	36	97	hsa-miR-96-5p	<a href="#">PALLD</a>	palladin, cytoskeletal associated protein
<a href="#">Details</a>	37	97	hsa-miR-96-5p	<a href="#">FOXF2</a>	forkhead box F2
<a href="#">Details</a>	38	97	hsa-miR-96-5p	<a href="#">CHST1</a>	carbohydrate sulfotransferase 1
<a href="#">Details</a>	39	97	hsa-miR-96-5p	<a href="#">MYRIP</a>	myosin VIIA and Rab interacting protein
<a href="#">Details</a>	40	97	hsa-miR-96-5p	<a href="#">ZBTB41</a>	zinc finger and BTB domain containing 41

<a href="#">Details</a>	41	97	hsa-miR-96-5p	<a href="#">FRMD5</a>	FERM domain containing 5
<a href="#">Details</a>	42	97	hsa-miR-96-5p	<a href="#">CACNA2D2</a>	calcium voltage-gated channel auxiliary subunit alpha2delta 2
<a href="#">Details</a>	43	97	hsa-miR-96-5p	<a href="#">PRKCE</a>	protein kinase C epsilon
<a href="#">Details</a>	44	97	hsa-miR-96-5p	<a href="#">SH3KBP1</a>	SH3 domain containing kinase binding protein 1
<a href="#">Details</a>	45	97	hsa-miR-96-5p	<a href="#">NOVA2</a>	NOVA alternative splicing regulator 2
<a href="#">Details</a>	46	97	hsa-miR-96-5p	<a href="#">ZEB1</a>	zinc finger E-box binding homeobox 1
<a href="#">Details</a>	47	97	hsa-miR-96-5p	<a href="#">MTOR</a>	mechanistic target of rapamycin kinase
<a href="#">Details</a>	48	97	hsa-miR-96-5p	<a href="#">SLC39A1</a>	solute carrier family 39 member 1
<a href="#">Details</a>	49	96	hsa-miR-96-5p	<a href="#">PRRG3</a>	proline rich and Gla domain 3
<a href="#">Details</a>	50	96	hsa-miR-96-5p	<a href="#">TTYH3</a>	tweety family member 3
<a href="#">Details</a>	51	96	hsa-miR-96-5p	<a href="#">NLGN2</a>	neuroligin 2
<a href="#">Details</a>	52	96	hsa-miR-96-5p	<a href="#">FOXO1</a>	forkhead box O1
<a href="#">Details</a>	53	96	hsa-miR-96-5p	<a href="#">ARHGAP6</a>	Rho GTPase activating protein 6
<a href="#">Details</a>	54	96	hsa-miR-96-5p	<a href="#">ANKRD27</a>	ankyrin repeat domain 27
<a href="#">Details</a>	55	96	hsa-miR-96-5p	<a href="#">SESN3</a>	sestrin 3
<a href="#">Details</a>	56	96	hsa-miR-96-5p	<a href="#">CEP170B</a>	centrosomal protein 170B
<a href="#">Details</a>	57	96	hsa-miR-96-5p	<a href="#">VAT1L</a>	vesicle amine transport 1 like
<a href="#">Details</a>	58	96	hsa-miR-96-5p	<a href="#">PPP4R3A</a>	protein phosphatase 4 regulatory subunit 3A
<a href="#">Details</a>	59	96	hsa-miR-96-5p	<a href="#">STAG1</a>	stromal antigen 1
<a href="#">Details</a>	60	96	hsa-miR-96-5p	<a href="#">CD164</a>	CD164 molecule
<a href="#">Details</a>	61	96	hsa-miR-96-5p	<a href="#">UNC13C</a>	unc-13 homolog C
<a href="#">Details</a>	62	96	hsa-miR-96-5p	<a href="#">DOCK1</a>	dedicator of cytokinesis 1
<a href="#">Details</a>	63	96	hsa-miR-96-5p	<a href="#">SPEN</a>	spen family transcriptional repressor
<a href="#">Details</a>	64	96	hsa-miR-96-5p	<a href="#">TMEM170B</a>	transmembrane protein 170B
<a href="#">Details</a>	65	96	hsa-miR-96-5p	<a href="#">REV1</a>	REV1, DNA directed polymerase
<a href="#">Details</a>	66	96	hsa-miR-96-5p	<a href="#">PPM1L</a>	protein phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> dependent 1L
<a href="#">Details</a>	67	96	hsa-miR-96-5p	<a href="#">NRN1</a>	neuritin 1
<a href="#">Details</a>	68	96	hsa-miR-96-5p	<a href="#">MIGA1</a>	mitoguardin 1
<a href="#">Details</a>	69	96	hsa-miR-96-5p	<a href="#">STK19</a>	serine/threonine kinase 19
<a href="#">Details</a>	70	96	hsa-miR-96-5p	<a href="#">TMEM198</a>	transmembrane protein 198
<a href="#">Details</a>	71	96	hsa-miR-96-5p	<a href="#">SPAST</a>	spastin
<a href="#">Details</a>	72	96	hsa-miR-96-5p	<a href="#">RGS17</a>	regulator of G protein signaling 17
<a href="#">Details</a>	73	95	hsa-miR-96-5p	<a href="#">BNC2</a>	basonuclin 2
<a href="#">Details</a>	74	95	hsa-miR-96-5p	<a href="#">WIPI2</a>	WD repeat domain, phosphoinositide interacting 2
<a href="#">Details</a>	75	95	hsa-miR-96-5p	<a href="#">SLC12A6</a>	solute carrier family 12 member 6
<a href="#">Details</a>	76	95	hsa-miR-96-5p	<a href="#">GPR22</a>	G protein-coupled receptor 22
<a href="#">Details</a>	77	95	hsa-miR-96-5p	<a href="#">SLC33A1</a>	solute carrier family 33 member 1
<a href="#">Details</a>	78	95	hsa-miR-96-5p	<a href="#">TNS3</a>	tensin 3
<a href="#">Details</a>	79	95	hsa-miR-96-5p	<a href="#">FAM171A1</a>	family with sequence similarity 171 member A1
<a href="#">Details</a>	80	95	hsa-miR-96-5p	<a href="#">MSN</a>	moesin
<a href="#">Details</a>	81	95	hsa-miR-96-5p	<a href="#">ATXN3</a>	ataxin 3
<a href="#">Details</a>	82	95	hsa-miR-96-5p	<a href="#">ZNF704</a>	zinc finger protein 704
<a href="#">Details</a>	83	95	hsa-miR-96-5p	<a href="#">ADK</a>	adenosine kinase
<a href="#">Details</a>	84	95	hsa-miR-96-5p	<a href="#">SLC22A5</a>	solute carrier family 22 member 5
<a href="#">Details</a>	85	95	hsa-miR-96-5p	<a href="#">HBEGF</a>	heparin binding EGF like growth factor
<a href="#">Details</a>	86	95	hsa-miR-96-5p	<a href="#">CDH20</a>	cadherin 20
<a href="#">Details</a>	87	95	hsa-miR-96-5p	<a href="#">FOXQ1</a>	forkhead box Q1
<a href="#">Details</a>	88	95	hsa-miR-96-5p	<a href="#">SPRY3</a>	sprouty RTK signaling antagonist 3
<a href="#">Details</a>	89	95	hsa-miR-96-5p	<a href="#">RAB3C</a>	RAB3C, member RAS oncogene family
<a href="#">Details</a>	90	95	hsa-miR-96-5p	<a href="#">CERS2</a>	ceramide synthase 2

<a href="#">Details</a>	91	95	hsa-miR-96-5p	<a href="#">RNF139</a>	ring finger protein 139
<a href="#">Details</a>	92	95	hsa-miR-96-5p	<a href="#">CHIC1</a>	cysteine rich hydrophobic domain 1
<a href="#">Details</a>	93	95	hsa-miR-96-5p	<a href="#">DEPTOR</a>	DEP domain containing MTOR interacting protein
<a href="#">Details</a>	94	95	hsa-miR-96-5p	<a href="#">PHYHIPL</a>	phytanoyl-CoA 2-hydroxylase interacting protein like
<a href="#">Details</a>	95	95	hsa-miR-96-5p	<a href="#">CBFA2T3</a>	CBFA2/RUNX1 translocation partner 3
<a href="#">Details</a>	96	94	hsa-miR-96-5p	<a href="#">EPAS1</a>	endothelial PAS domain protein 1
<a href="#">Details</a>	97	94	hsa-miR-96-5p	<a href="#">ABCA2</a>	ATP binding cassette subfamily A member 2
<a href="#">Details</a>	98	94	hsa-miR-96-5p	<a href="#">NTN4</a>	netrin 4
<a href="#">Details</a>	99	94	hsa-miR-96-5p	<a href="#">APPL1</a>	adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1
<a href="#">Details</a>	100	94	hsa-miR-96-5p	<a href="#">DEUP1</a>	deuterosome assembly protein 1
<a href="#">Details</a>	101	94	hsa-miR-96-5p	<a href="#">RASSF8</a>	Ras association domain family member 8
<a href="#">Details</a>	102	94	hsa-miR-96-5p	<a href="#">PURA</a>	purine rich element binding protein A
<a href="#">Details</a>	103	94	hsa-miR-96-5p	<a href="#">STMND1</a>	stathmin domain containing 1
<a href="#">Details</a>	104	94	hsa-miR-96-5p	<a href="#">YIPF4</a>	Yip1 domain family member 4
<a href="#">Details</a>	105	94	hsa-miR-96-5p	<a href="#">RPS6KA6</a>	ribosomal protein S6 kinase A6
<a href="#">Details</a>	106	94	hsa-miR-96-5p	<a href="#">FAM49B</a>	family with sequence similarity 49 member B
<a href="#">Details</a>	107	94	hsa-miR-96-5p	<a href="#">TAF4B</a>	TATA-box binding protein associated factor 4b
<a href="#">Details</a>	108	94	hsa-miR-96-5p	<a href="#">MTHFD2L</a>	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 2 like
<a href="#">Details</a>	109	94	hsa-miR-96-5p	<a href="#">SLC16A9</a>	solute carrier family 16 member 9
<a href="#">Details</a>	110	94	hsa-miR-96-5p	<a href="#">RALGPS1</a>	Ral GEF with PH domain and SH3 binding motif 1
<a href="#">Details</a>	111	94	hsa-miR-96-5p	<a href="#">CACNB4</a>	calcium voltage-gated channel auxiliary subunit beta 4
<a href="#">Details</a>	112	94	hsa-miR-96-5p	<a href="#">RICTOR</a>	RPTOR independent companion of MTOR complex 2
<a href="#">Details</a>	113	94	hsa-miR-96-5p	<a href="#">MROH2A</a>	maestro heat like repeat family member 2A
<a href="#">Details</a>	114	94	hsa-miR-96-5p	<a href="#">PLOD2</a>	procollagen-lysine,2-oxoglutarate 5-dioxygenase 2
<a href="#">Details</a>	115	94	hsa-miR-96-5p	<a href="#">VAT1</a>	vesicle amine transport 1
<a href="#">Details</a>	116	94	hsa-miR-96-5p	<a href="#">ZHX1</a>	zinc fingers and homeoboxes 1
<a href="#">Details</a>	117	94	hsa-miR-96-5p	<a href="#">NCALD</a>	neurocalcin delta
<a href="#">Details</a>	118	94	hsa-miR-96-5p	<a href="#">EOMES</a>	eomesodermin
<a href="#">Details</a>	119	94	hsa-miR-96-5p	<a href="#">PLCB4</a>	phospholipase C beta 4
<a href="#">Details</a>	120	94	hsa-miR-96-5p	<a href="#">OVOL1</a>	ovo like transcriptional repressor 1
<a href="#">Details</a>	121	93	hsa-miR-96-5p	<a href="#">TUT4</a>	terminal uridylyl transferase 4
<a href="#">Details</a>	122	93	hsa-miR-96-5p	<a href="#">TRIM9</a>	tripartite motif containing 9
<a href="#">Details</a>	123	93	hsa-miR-96-5p	<a href="#">LGI1</a>	leucine rich glioma inactivated 1
<a href="#">Details</a>	124	93	hsa-miR-96-5p	<a href="#">PPIL1</a>	peptidylprolyl isomerase like 1
<a href="#">Details</a>	125	93	hsa-miR-96-5p	<a href="#">CHST10</a>	carbohydrate sulfotransferase 10
<a href="#">Details</a>	126	93	hsa-miR-96-5p	<a href="#">CNNM3</a>	cyclin and CBS domain divalent metal cation transport mediator 3
<a href="#">Details</a>	127	93	hsa-miR-96-5p	<a href="#">CADM2</a>	cell adhesion molecule 2
<a href="#">Details</a>	128	93	hsa-miR-96-5p	<a href="#">MORF4L2</a>	mortality factor 4 like 2
<a href="#">Details</a>	129	93	hsa-miR-96-5p	<a href="#">LRRC7</a>	leucine rich repeat containing 7
<a href="#">Details</a>	130	93	hsa-miR-96-5p	<a href="#">TAC1</a>	tachykinin precursor 1
<a href="#">Details</a>	131	93	hsa-miR-96-5p	<a href="#">PDE8B</a>	phosphodiesterase 8B
<a href="#">Details</a>	132	93	hsa-miR-96-5p	<a href="#">PTPMT1</a>	protein tyrosine phosphatase, mitochondrial 1

<a href="#">Details</a>	133	93	hsa-miR-96-5p	<a href="#">MFAP3L</a>	microfibril associated protein 3 like
<a href="#">Details</a>	134	93	hsa-miR-96-5p	<a href="#">SLC39A9</a>	solute carrier family 39 member 9
<a href="#">Details</a>	135	93	hsa-miR-96-5p	<a href="#">PPP3R1</a>	protein phosphatase 3 regulatory subunit B, alpha
<a href="#">Details</a>	136	93	hsa-miR-96-5p	<a href="#">L1CAM</a>	L1 cell adhesion molecule
<a href="#">Details</a>	137	93	hsa-miR-96-5p	<a href="#">PYGO2</a>	pygopus family PHD finger 2
<a href="#">Details</a>	138	93	hsa-miR-96-5p	<a href="#">SDC2</a>	syndecan 2
<a href="#">Details</a>	139	93	hsa-miR-96-5p	<a href="#">STX5</a>	syntaxin 5
<a href="#">Details</a>	140	93	hsa-miR-96-5p	<a href="#">ANKIB1</a>	ankyrin repeat and IBR domain containing 1
<a href="#">Details</a>	141	93	hsa-miR-96-5p	<a href="#">PRRT3</a>	proline rich transmembrane protein 3
<a href="#">Details</a>	142	93	hsa-miR-96-5p	<a href="#">KPNB1</a>	karyopherin subunit beta 1
<a href="#">Details</a>	143	93	hsa-miR-96-5p	<a href="#">KLHL7</a>	kelch like family member 7
<a href="#">Details</a>	144	93	hsa-miR-96-5p	<a href="#">PPM1F</a>	protein phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> -dependent 1F
<a href="#">Details</a>	145	93	hsa-miR-96-5p	<a href="#">AGO4</a>	argonaute RISC catalytic component 4
<a href="#">Details</a>	146	93	hsa-miR-96-5p	<a href="#">ZFAND5</a>	zinc finger AN1-type containing 5
<a href="#">Details</a>	147	93	hsa-miR-96-5p	<a href="#">CRYGS</a>	crystallin gamma S
<a href="#">Details</a>	148	93	hsa-miR-96-5p	<a href="#">EBF3</a>	EBF transcription factor 3
<a href="#">Details</a>	149	93	hsa-miR-96-5p	<a href="#">ADGRB3</a>	adhesion G protein-coupled receptor B3
<a href="#">Details</a>	150	92	hsa-miR-96-5p	<a href="#">ZFC3H1</a>	zinc finger C3H1-type containing
<a href="#">Details</a>	151	92	hsa-miR-96-5p	<a href="#">TARBP1</a>	TAR (HIV-1) RNA binding protein 1
<a href="#">Details</a>	152	92	hsa-miR-96-5p	<a href="#">PAFAH1B1</a>	platelet activating factor acetylhydrolase 1b regulatory subunit 1
<a href="#">Details</a>	153	92	hsa-miR-96-5p	<a href="#">DCUN1D3</a>	defective in cullin neddylation 1 domain containing 3
<a href="#">Details</a>	154	92	hsa-miR-96-5p	<a href="#">SLC12A5</a>	solute carrier family 12 member 5
<a href="#">Details</a>	155	92	hsa-miR-96-5p	<a href="#">LRIG1</a>	leucine rich repeats and immunoglobulin like domains 1
<a href="#">Details</a>	156	92	hsa-miR-96-5p	<a href="#">RAPGEF4</a>	Rap guanine nucleotide exchange factor 4
<a href="#">Details</a>	157	92	hsa-miR-96-5p	<a href="#">RGS2</a>	regulator of G protein signaling 2
<a href="#">Details</a>	158	92	hsa-miR-96-5p	<a href="#">RARG</a>	retinoic acid receptor gamma
<a href="#">Details</a>	159	92	hsa-miR-96-5p	<a href="#">ZFHX4</a>	zinc finger homeobox 4
<a href="#">Details</a>	160	92	hsa-miR-96-5p	<a href="#">ARPC5L</a>	actin related protein 2/3 complex subunit 5 like
<a href="#">Details</a>	161	92	hsa-miR-96-5p	<a href="#">AK3</a>	adenylate kinase 3
<a href="#">Details</a>	162	92	hsa-miR-96-5p	<a href="#">GIT2</a>	GIT ArfGAP 2
<a href="#">Details</a>	163	92	hsa-miR-96-5p	<a href="#">MAP3K3</a>	mitogen-activated protein kinase kinase kinase 3
<a href="#">Details</a>	164	92	hsa-miR-96-5p	<a href="#">ERG</a>	ETS transcription factor ERG
<a href="#">Details</a>	165	92	hsa-miR-96-5p	<a href="#">GBP5</a>	guanylate binding protein 5
<a href="#">Details</a>	166	92	hsa-miR-96-5p	<a href="#">YWHAG</a>	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein gamma
<a href="#">Details</a>	167	92	hsa-miR-96-5p	<a href="#">PRKAR1A</a>	protein kinase cAMP-dependent type I regulatory subunit alpha
<a href="#">Details</a>	168	92	hsa-miR-96-5p	<a href="#">RELL1</a>	RELT like 1
<a href="#">Details</a>	169	92	hsa-miR-96-5p	<a href="#">PRDM16</a>	PR/SET domain 16
<a href="#">Details</a>	170	92	hsa-miR-96-5p	<a href="#">SERINC5</a>	serine incorporator 5
<a href="#">Details</a>	171	92	hsa-miR-96-5p	<a href="#">FARP1</a>	FERM, ARH/RhoGEF and pleckstrin domain protein 1
<a href="#">Details</a>	172	92	hsa-miR-96-5p	<a href="#">ABCD1</a>	ATP binding cassette subfamily D member 1
<a href="#">Details</a>	173	92	hsa-miR-96-5p	<a href="#">EPHA3</a>	EPH receptor A3
<a href="#">Details</a>	174	92	hsa-miR-96-5p	<a href="#">BRWD3</a>	bromodomain and WD repeat domain containing 3
<a href="#">Details</a>	175	91	hsa-miR-96-5p	<a href="#">GLE1</a>	GLE1, RNA export mediator
<a href="#">Details</a>	176	91	hsa-miR-96-5p	<a href="#">GALNT2</a>	polypeptide N-

					acetylgalactosaminyltransferase 2
<a href="#">Details</a>	177	91	hsa-miR-96-5p	<a href="#">SNX16</a>	sorting nexin 16
<a href="#">Details</a>	178	91	hsa-miR-96-5p	<a href="#">DCUN1D1</a>	defective in cullin neddylation 1 domain containing 1
<a href="#">Details</a>	179	91	hsa-miR-96-5p	<a href="#">XKR4</a>	XK related 4
<a href="#">Details</a>	180	91	hsa-miR-96-5p	<a href="#">BICRAL</a>	BRD4 interacting chromatin remodeling complex associated protein like
<a href="#">Details</a>	181	91	hsa-miR-96-5p	<a href="#">MCMBP</a>	minichromosome maintenance complex binding protein
<a href="#">Details</a>	182	91	hsa-miR-96-5p	<a href="#">PTGER3</a>	prostaglandin E receptor 3
<a href="#">Details</a>	183	91	hsa-miR-96-5p	<a href="#">ARHGEF3</a>	Rho guanine nucleotide exchange factor 3
<a href="#">Details</a>	184	91	hsa-miR-96-5p	<a href="#">CNOT6L</a>	CCR4-NOT transcription complex subunit 6 like
<a href="#">Details</a>	185	91	hsa-miR-96-5p	<a href="#">BRMS1L</a>	BRMS1 like transcriptional repressor
<a href="#">Details</a>	186	91	hsa-miR-96-5p	<a href="#">ALK</a>	ALK receptor tyrosine kinase
<a href="#">Details</a>	187	91	hsa-miR-96-5p	<a href="#">RGPD1</a>	RANBP2-like and GRIP domain containing 1
<a href="#">Details</a>	188	91	hsa-miR-96-5p	<a href="#">SCML4</a>	Scm polycomb group protein like 4
<a href="#">Details</a>	189	91	hsa-miR-96-5p	<a href="#">RWDD4</a>	RWD domain containing 4
<a href="#">Details</a>	190	91	hsa-miR-96-5p	<a href="#">FEM1B</a>	fem-1 homolog B
<a href="#">Details</a>	191	91	hsa-miR-96-5p	<a href="#">TRIB3</a>	tribbles pseudokinase 3
<a href="#">Details</a>	192	91	hsa-miR-96-5p	<a href="#">FNDC3B</a>	fibronectin type III domain containing 3B
<a href="#">Details</a>	193	91	hsa-miR-96-5p	<a href="#">LAMC1</a>	laminin subunit gamma 1
<a href="#">Details</a>	194	90	hsa-miR-96-5p	<a href="#">OGT</a>	O-linked N-acetylglicosamine (GlcNAc) transferase
<a href="#">Details</a>	195	90	hsa-miR-96-5p	<a href="#">RAB27A</a>	RAB27A, member RAS oncogene family
<a href="#">Details</a>	196	90	hsa-miR-96-5p	<a href="#">PRIMA1</a>	proline rich membrane anchor 1
<a href="#">Details</a>	197	90	hsa-miR-96-5p	<a href="#">LMTK3</a>	lemur tyrosine kinase 3
<a href="#">Details</a>	198	90	hsa-miR-96-5p	<a href="#">TCF7L2</a>	transcription factor 7 like 2
<a href="#">Details</a>	199	90	hsa-miR-96-5p	<a href="#">PNPLA1</a>	patatin like phospholipase domain containing 1
<a href="#">Details</a>	200	90	hsa-miR-96-5p	<a href="#">MORF4L1</a>	mortality factor 4 like 1
<a href="#">Details</a>	201	90	hsa-miR-96-5p	<a href="#">OR10W1</a>	olfactory receptor family 10 subfamily W member 1
<a href="#">Details</a>	202	90	hsa-miR-96-5p	<a href="#">DOCK4</a>	dedicator of cytokinesis 4
<a href="#">Details</a>	203	90	hsa-miR-96-5p	<a href="#">ACTRT3</a>	actin related protein T3
<a href="#">Details</a>	204	90	hsa-miR-96-5p	<a href="#">PHACTR4</a>	phosphatase and actin regulator 4
<a href="#">Details</a>	205	90	hsa-miR-96-5p	<a href="#">SLF2</a>	SMC5-SMC6 complex localization factor 2
<a href="#">Details</a>	206	90	hsa-miR-96-5p	<a href="#">LPP</a>	LIM domain containing preferred translocation partner in lipoma
<a href="#">Details</a>	207	90	hsa-miR-96-5p	<a href="#">NANOS1</a>	nanos C2HC-type zinc finger 1
<a href="#">Details</a>	208	90	hsa-miR-96-5p	<a href="#">C5orf22</a>	chromosome 5 open reading frame 22
<a href="#">Details</a>	209	90	hsa-miR-96-5p	<a href="#">QKI</a>	QKI, KH domain containing RNA binding
<a href="#">Details</a>	210	90	hsa-miR-96-5p	<a href="#">THBS2</a>	thrombospondin 2
<a href="#">Details</a>	211	90	hsa-miR-96-5p	<a href="#">PIK3C2A</a>	phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 alpha
<a href="#">Details</a>	212	90	hsa-miR-96-5p	<a href="#">ST6GALNAC3</a>	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 3
<a href="#">Details</a>	213	90	hsa-miR-96-5p	<a href="#">GAN</a>	gigaxonin
<a href="#">Details</a>	214	90	hsa-miR-96-5p	<a href="#">CTDSP1</a>	CTD small phosphatase 1
<a href="#">Details</a>	215	90	hsa-miR-96-5p	<a href="#">DDAH1</a>	dimethylarginine dimethylaminohydrolase 1
<a href="#">Details</a>	216	90	hsa-miR-96-5p	<a href="#">AP3S1</a>	adaptor related protein complex 3 subunit sigma 1
<a href="#">Details</a>	217	90	hsa-miR-96-5p	<a href="#">FOXO3</a>	forkhead box O3
<a href="#">Details</a>	218	90	hsa-miR-96-5p	<a href="#">STK17B</a>	serine/threonine kinase 17b
<a href="#">Details</a>	219	90	hsa-miR-96-5p	<a href="#">GRB2</a>	growth factor receptor bound protein 2
<a href="#">Details</a>	220	89	hsa-miR-96-5p	<a href="#">RAB23</a>	RAB23, member RAS oncogene family

<a href="#">Details</a>	221	89	hsa-miR-96-5p	<a href="#">TOX</a>	thymocyte selection associated high mobility group box
<a href="#">Details</a>	222	89	hsa-miR-96-5p	<a href="#">RDH11</a>	retinol dehydrogenase 11
<a href="#">Details</a>	223	89	hsa-miR-96-5p	<a href="#">SEZ6L</a>	seizure related 6 homolog like
<a href="#">Details</a>	224	89	hsa-miR-96-5p	<a href="#">SLC38A4</a>	solute carrier family 38 member 4
<a href="#">Details</a>	225	89	hsa-miR-96-5p	<a href="#">BCL2L12</a>	BCL2 like 12
<a href="#">Details</a>	226	89	hsa-miR-96-5p	<a href="#">SLC6A9</a>	solute carrier family 6 member 9
<a href="#">Details</a>	227	89	hsa-miR-96-5p	<a href="#">C20orf194</a>	chromosome 20 open reading frame 194
<a href="#">Details</a>	228	89	hsa-miR-96-5p	<a href="#">FYCO1</a>	FYVE and coiled-coil domain containing 1
<a href="#">Details</a>	229	89	hsa-miR-96-5p	<a href="#">STK17A</a>	serine/threonine kinase 17a
<a href="#">Details</a>	230	89	hsa-miR-96-5p	<a href="#">FGF9</a>	fibroblast growth factor 9
<a href="#">Details</a>	231	89	hsa-miR-96-5p	<a href="#">PCGF5</a>	polycomb group ring finger 5
<a href="#">Details</a>	232	89	hsa-miR-96-5p	<a href="#">SINHCAF</a>	SIN3-HDAC complex associated factor
<a href="#">Details</a>	233	89	hsa-miR-96-5p	<a href="#">NUS1</a>	NUS1, dehydrodolichyl diphosphate synthase subunit
<a href="#">Details</a>	234	89	hsa-miR-96-5p	<a href="#">MAK</a>	male germ cell associated kinase
<a href="#">Details</a>	235	89	hsa-miR-96-5p	<a href="#">DLEU7</a>	deleted in lymphocytic leukemia 7
<a href="#">Details</a>	236	89	hsa-miR-96-5p	<a href="#">RAB10</a>	RAB10, member RAS oncogene family
<a href="#">Details</a>	237	89	hsa-miR-96-5p	<a href="#">IRS1</a>	insulin receptor substrate 1
<a href="#">Details</a>	238	89	hsa-miR-96-5p	<a href="#">CELSR2</a>	cadherin EGF LAG seven-pass G-type receptor 2
<a href="#">Details</a>	239	89	hsa-miR-96-5p	<a href="#">ADGRL2</a>	adhesion G protein-coupled receptor L2
<a href="#">Details</a>	240	89	hsa-miR-96-5p	<a href="#">ZDHHC17</a>	zinc finger DHHC-type containing 17
<a href="#">Details</a>	241	89	hsa-miR-96-5p	<a href="#">B3GNT2</a>	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 2
<a href="#">Details</a>	242	89	hsa-miR-96-5p	<a href="#">PPP1R9B</a>	protein phosphatase 1 regulatory subunit 9B
<a href="#">Details</a>	243	89	hsa-miR-96-5p	<a href="#">ZHX2</a>	zinc fingers and homeoboxes 2
<a href="#">Details</a>	244	89	hsa-miR-96-5p	<a href="#">RUNDC3B</a>	RUN domain containing 3B
<a href="#">Details</a>	245	89	hsa-miR-96-5p	<a href="#">WDR82</a>	WD repeat domain 82
<a href="#">Details</a>	246	89	hsa-miR-96-5p	<a href="#">HSPA2</a>	heat shock protein family A (Hsp70) member 2
<a href="#">Details</a>	247	89	hsa-miR-96-5p	<a href="#">KIAA0513</a>	KIAA0513
<a href="#">Details</a>	248	88	hsa-miR-96-5p	<a href="#">KIAA1217</a>	KIAA1217
<a href="#">Details</a>	249	88	hsa-miR-96-5p	<a href="#">ANXA11</a>	annexin A11
<a href="#">Details</a>	250	88	hsa-miR-96-5p	<a href="#">NCKAP1</a>	NCK associated protein 1
<a href="#">Details</a>	251	88	hsa-miR-96-5p	<a href="#">GCNT1</a>	glucosaminyl (N-acetyl) transferase 1
<a href="#">Details</a>	252	88	hsa-miR-96-5p	<a href="#">DAAM1</a>	dishevelled associated activator of morphogenesis 1
<a href="#">Details</a>	253	88	hsa-miR-96-5p	<a href="#">BRINP2</a>	BMP/retinoic acid inducible neural specific 2
<a href="#">Details</a>	254	88	hsa-miR-96-5p	<a href="#">MRAS</a>	muscle RAS oncogene homolog
<a href="#">Details</a>	255	88	hsa-miR-96-5p	<a href="#">PDZD8</a>	PDZ domain containing 8
<a href="#">Details</a>	256	88	hsa-miR-96-5p	<a href="#">AZIN1</a>	antizyme inhibitor 1
<a href="#">Details</a>	257	88	hsa-miR-96-5p	<a href="#">MAP2K1</a>	mitogen-activated protein kinase kinase 1
<a href="#">Details</a>	258	88	hsa-miR-96-5p	<a href="#">GAP43</a>	growth associated protein 43
<a href="#">Details</a>	259	88	hsa-miR-96-5p	<a href="#">AJAP1</a>	adherens junctions associated protein 1
<a href="#">Details</a>	260	88	hsa-miR-96-5p	<a href="#">FN1</a>	fibronectin 1
<a href="#">Details</a>	261	88	hsa-miR-96-5p	<a href="#">ATP2B4</a>	ATPase plasma membrane Ca2+ transporting 4
<a href="#">Details</a>	262	88	hsa-miR-96-5p	<a href="#">MITF</a>	melanocyte inducing transcription factor
<a href="#">Details</a>	263	88	hsa-miR-96-5p	<a href="#">SEPT9</a>	septin 9
<a href="#">Details</a>	264	88	hsa-miR-96-5p	<a href="#">RALB</a>	RAS like proto-oncogene B
<a href="#">Details</a>	265	88	hsa-miR-96-5p	<a href="#">NPTX2</a>	neuronal pentraxin 2
<a href="#">Details</a>	266	88	hsa-miR-96-5p	<a href="#">TOPORS</a>	TOP1 binding arginine-serine rich protein
<a href="#">Details</a>	267	88	hsa-miR-96-5p	<a href="#">SH3PXD2B</a>	SH3 and PX domains 2B

<a href="#">Details</a>	268	88	hsa-miR-96-5p	<a href="#">KLHL4</a>	kelch like family member 4
<a href="#">Details</a>	269	88	hsa-miR-96-5p	<a href="#">PRRX1</a>	paired related homeobox 1
<a href="#">Details</a>	270	88	hsa-miR-96-5p	<a href="#">LILRA1</a>	leukocyte immunoglobulin like receptor A1
<a href="#">Details</a>	271	88	hsa-miR-96-5p	<a href="#">PAIP1</a>	poly(A) binding protein interacting protein 1
<a href="#">Details</a>	272	88	hsa-miR-96-5p	<a href="#">ARPP19</a>	cAMP regulated phosphoprotein 19
<a href="#">Details</a>	273	87	hsa-miR-96-5p	<a href="#">MED14</a>	mediator complex subunit 14
<a href="#">Details</a>	274	87	hsa-miR-96-5p	<a href="#">GPC3</a>	glycan 3
<a href="#">Details</a>	275	87	hsa-miR-96-5p	<a href="#">HOXA9</a>	homeobox A9
<a href="#">Details</a>	276	87	hsa-miR-96-5p	<a href="#">AQP2</a>	aquaporin 2
<a href="#">Details</a>	277	87	hsa-miR-96-5p	<a href="#">SV2C</a>	synaptic vesicle glycoprotein 2C
<a href="#">Details</a>	278	87	hsa-miR-96-5p	<a href="#">KCNK9</a>	potassium two pore domain channel subfamily K member 9
<a href="#">Details</a>	279	87	hsa-miR-96-5p	<a href="#">ARHGEF12</a>	Rho guanine nucleotide exchange factor 12
<a href="#">Details</a>	280	87	hsa-miR-96-5p	<a href="#">FOXK2</a>	forkhead box K2
<a href="#">Details</a>	281	87	hsa-miR-96-5p	<a href="#">OXGR1</a>	oxoglutarate receptor 1
<a href="#">Details</a>	282	87	hsa-miR-96-5p	<a href="#">MAST4</a>	microtubule associated serine/threonine kinase family member 4
<a href="#">Details</a>	283	87	hsa-miR-96-5p	<a href="#">USF3</a>	upstream transcription factor family member 3
<a href="#">Details</a>	284	87	hsa-miR-96-5p	<a href="#">SOGA1</a>	suppressor of glucose, autophagy associated 1
<a href="#">Details</a>	285	87	hsa-miR-96-5p	<a href="#">EVI5</a>	ecotropic viral integration site 5
<a href="#">Details</a>	286	87	hsa-miR-96-5p	<a href="#">RITA1</a>	RBPJ interacting and tubulin associated 1
<a href="#">Details</a>	287	87	hsa-miR-96-5p	<a href="#">CNTN1</a>	contactin 1
<a href="#">Details</a>	288	87	hsa-miR-96-5p	<a href="#">GPR135</a>	G protein-coupled receptor 135
<a href="#">Details</a>	289	87	hsa-miR-96-5p	<a href="#">BCR</a>	BCR, RhoGEF and GTPase activating protein
<a href="#">Details</a>	290	87	hsa-miR-96-5p	<a href="#">NUDT13</a>	nudix hydrolase 13
<a href="#">Details</a>	291	87	hsa-miR-96-5p	<a href="#">DMXL1</a>	Dmx like 1
<a href="#">Details</a>	292	87	hsa-miR-96-5p	<a href="#">DHX8</a>	DEAH-box helicase 8
<a href="#">Details</a>	293	87	hsa-miR-96-5p	<a href="#">RAB2A</a>	RAB2A, member RAS oncogene family
<a href="#">Details</a>	294	87	hsa-miR-96-5p	<a href="#">EXT1</a>	exostosin glycosyltransferase 1
<a href="#">Details</a>	295	87	hsa-miR-96-5p	<a href="#">TRIM46</a>	tripartite motif containing 46
<a href="#">Details</a>	296	87	hsa-miR-96-5p	<a href="#">IGF1R</a>	insulin like growth factor 1 receptor
<a href="#">Details</a>	297	87	hsa-miR-96-5p	<a href="#">KRAS</a>	KRAS proto-oncogene, GTPase
<a href="#">Details</a>	298	87	hsa-miR-96-5p	<a href="#">SLC44A5</a>	solute carrier family 44 member 5
<a href="#">Details</a>	299	87	hsa-miR-96-5p	<a href="#">CRKL</a>	CRK like proto-oncogene, adaptor protein
<a href="#">Details</a>	300	87	hsa-miR-96-5p	<a href="#">CREB3L2</a>	cAMP responsive element binding protein 3 like 2
<a href="#">Details</a>	301	87	hsa-miR-96-5p	<a href="#">ASH1L</a>	ASH1 like histone lysine methyltransferase
<a href="#">Details</a>	302	86	hsa-miR-96-5p	<a href="#">SMAD1</a>	SMAD family member 1
<a href="#">Details</a>	303	86	hsa-miR-96-5p	<a href="#">RBM20</a>	RNA binding motif protein 20
<a href="#">Details</a>	304	86	hsa-miR-96-5p	<a href="#">ABHD13</a>	abhydrolase domain containing 13
<a href="#">Details</a>	305	86	hsa-miR-96-5p	<a href="#">LRRC3</a>	leucine rich repeat containing 3
<a href="#">Details</a>	306	86	hsa-miR-96-5p	<a href="#">COL13A1</a>	collagen type XIII alpha 1 chain
<a href="#">Details</a>	307	86	hsa-miR-96-5p	<a href="#">C16orf70</a>	chromosome 16 open reading frame 70
<a href="#">Details</a>	308	86	hsa-miR-96-5p	<a href="#">SOX5</a>	SRY-box 5
<a href="#">Details</a>	309	86	hsa-miR-96-5p	<a href="#">GRIA1</a>	glutamate ionotropic receptor AMPA type subunit 1
<a href="#">Details</a>	310	86	hsa-miR-96-5p	<a href="#">DPYD</a>	dihydropyrimidine dehydrogenase
<a href="#">Details</a>	311	86	hsa-miR-96-5p	<a href="#">LMTK2</a>	lemur tyrosine kinase 2
<a href="#">Details</a>	312	86	hsa-miR-96-5p	<a href="#">MFAP3</a>	microfibril associated protein 3
<a href="#">Details</a>	313	86	hsa-miR-96-5p	<a href="#">SORT1</a>	sortilin 1
<a href="#">Details</a>	314	86	hsa-miR-96-5p	<a href="#">PTP4A1</a>	protein tyrosine phosphatase type IVA, member 1

<a href="#">Details</a>	315	86	hsa-miR-96-5p	<a href="#">DOCK9</a>	dedicator of cytokinesis 9
<a href="#">Details</a>	316	86	hsa-miR-96-5p	<a href="#">MAP2K3</a>	mitogen-activated protein kinase kinase 3
<a href="#">Details</a>	317	86	hsa-miR-96-5p	<a href="#">SLC24A4</a>	solute carrier family 24 member 4
<a href="#">Details</a>	318	86	hsa-miR-96-5p	<a href="#">GXYLT1</a>	glucoside xylosyltransferase 1
<a href="#">Details</a>	319	86	hsa-miR-96-5p	<a href="#">YES1</a>	YES proto-oncogene 1, Src family tyrosine kinase
<a href="#">Details</a>	320	86	hsa-miR-96-5p	<a href="#">ERLIN1</a>	ER lipid raft associated 1
<a href="#">Details</a>	321	86	hsa-miR-96-5p	<a href="#">PLAGL1</a>	PLAG1 like zinc finger 1
<a href="#">Details</a>	322	86	hsa-miR-96-5p	<a href="#">SPAG8</a>	sperm associated antigen 8
<a href="#">Details</a>	323	86	hsa-miR-96-5p	<a href="#">BNIP3</a>	BCL2 interacting protein 3
<a href="#">Details</a>	324	86	hsa-miR-96-5p	<a href="#">PBX2</a>	PBX homeobox 2
<a href="#">Details</a>	325	86	hsa-miR-96-5p	<a href="#">CAV1</a>	caveolin 1
<a href="#">Details</a>	326	86	hsa-miR-96-5p	<a href="#">MAP1B</a>	microtubule associated protein 1B
<a href="#">Details</a>	327	85	hsa-miR-96-5p	<a href="#">LCP1</a>	lymphocyte cytosolic protein 1
<a href="#">Details</a>	328	85	hsa-miR-96-5p	<a href="#">CNN3</a>	calponin 3
<a href="#">Details</a>	329	85	hsa-miR-96-5p	<a href="#">PLEKHM1</a>	pleckstrin homology and RUN domain containing M1
<a href="#">Details</a>	330	85	hsa-miR-96-5p	<a href="#">AEBP2</a>	AE binding protein 2
<a href="#">Details</a>	331	85	hsa-miR-96-5p	<a href="#">RHPN2</a>	rhophilin Rho GTPase binding protein 2
<a href="#">Details</a>	332	85	hsa-miR-96-5p	<a href="#">ST7</a>	suppression of tumorigenicity 7
<a href="#">Details</a>	333	85	hsa-miR-96-5p	<a href="#">CAMK2N1</a>	calcium/calmodulin dependent protein kinase II inhibitor 1
<a href="#">Details</a>	334	85	hsa-miR-96-5p	<a href="#">TMEM169</a>	transmembrane protein 169
<a href="#">Details</a>	335	85	hsa-miR-96-5p	<a href="#">CASP2</a>	caspase 2
<a href="#">Details</a>	336	85	hsa-miR-96-5p	<a href="#">CPSF6</a>	cleavage and polyadenylation specific factor 6
<a href="#">Details</a>	337	85	hsa-miR-96-5p	<a href="#">PPP3CA</a>	protein phosphatase 3 catalytic subunit alpha
<a href="#">Details</a>	338	85	hsa-miR-96-5p	<a href="#">GDNF</a>	glial cell derived neurotrophic factor
<a href="#">Details</a>	339	85	hsa-miR-96-5p	<a href="#">PAK1</a>	p21 (RAC1) activated kinase 1
<a href="#">Details</a>	340	85	hsa-miR-96-5p	<a href="#">IGF2BP1</a>	insulin like growth factor 2 mRNA binding protein 1
<a href="#">Details</a>	341	85	hsa-miR-96-5p	<a href="#">TMEM189</a>	transmembrane protein 189
<a href="#">Details</a>	342	85	hsa-miR-96-5p	<a href="#">ITPR2</a>	inositol 1,4,5-trisphosphate receptor type 2
<a href="#">Details</a>	343	85	hsa-miR-96-5p	<a href="#">UBE2Q2</a>	ubiquitin conjugating enzyme E2 Q2
<a href="#">Details</a>	344	85	hsa-miR-96-5p	<a href="#">LRRC4</a>	leucine rich repeat containing 4
<a href="#">Details</a>	345	85	hsa-miR-96-5p	<a href="#">SERPINB2</a>	serpin family B member 2
<a href="#">Details</a>	346	85	hsa-miR-96-5p	<a href="#">USP5</a>	ubiquitin specific peptidase 5
<a href="#">Details</a>	347	85	hsa-miR-96-5p	<a href="#">GRHL2</a>	grainyhead like transcription factor 2
<a href="#">Details</a>	348	85	hsa-miR-96-5p	<a href="#">DPY19L3</a>	dpv-19 like C-mannosyltransferase 3
<a href="#">Details</a>	349	85	hsa-miR-96-5p	<a href="#">LRRC28</a>	leucine rich repeat containing 28
<a href="#">Details</a>	350	85	hsa-miR-96-5p	<a href="#">SLC7A8</a>	solute carrier family 7 member 8
<a href="#">Details</a>	351	85	hsa-miR-96-5p	<a href="#">SLC44A2</a>	solute carrier family 44 member 2
<a href="#">Details</a>	352	85	hsa-miR-96-5p	<a href="#">NEK7</a>	NIMA related kinase 7
<a href="#">Details</a>	353	84	hsa-miR-96-5p	<a href="#">SPSB1</a>	spla/ryanodine receptor domain and SOCS box containing 1
<a href="#">Details</a>	354	84	hsa-miR-96-5p	<a href="#">SLC26A9</a>	solute carrier family 26 member 9
<a href="#">Details</a>	355	84	hsa-miR-96-5p	<a href="#">GJC1</a>	gap junction protein gamma 1
<a href="#">Details</a>	356	84	hsa-miR-96-5p	<a href="#">EIF5</a>	eukaryotic translation initiation factor 5
<a href="#">Details</a>	357	84	hsa-miR-96-5p	<a href="#">KCNG3</a>	potassium voltage-gated channel modifier subfamily G member 3
<a href="#">Details</a>	358	84	hsa-miR-96-5p	<a href="#">PPP4R2</a>	protein phosphatase 4 regulatory subunit 2
<a href="#">Details</a>	359	84	hsa-miR-96-5p	<a href="#">TAPT1</a>	transmembrane anterior posterior transformation 1
<a href="#">Details</a>	360	84	hsa-miR-96-5p	<a href="#">ZNF667</a>	zinc finger protein 667

<a href="#">Details</a>	361	84	hsa-miR-96-5p	<a href="#">NOVA1</a>	NOVA alternative splicing regulator 1
<a href="#">Details</a>	362	84	hsa-miR-96-5p	<a href="#">EIF4EBP2</a>	eukaryotic translation initiation factor 4E binding protein 2
<a href="#">Details</a>	363	84	hsa-miR-96-5p	<a href="#">DLAT</a>	dihydrolipoamide S-acetyltransferase
<a href="#">Details</a>	364	84	hsa-miR-96-5p	<a href="#">ZCCHC14</a>	zinc finger CCHC-type containing 14
<a href="#">Details</a>	365	84	hsa-miR-96-5p	<a href="#">C2orf72</a>	chromosome 2 open reading frame 72
<a href="#">Details</a>	366	84	hsa-miR-96-5p	<a href="#">EDEM1</a>	ER degradation enhancing alpha-mannosidase like protein 1
<a href="#">Details</a>	367	84	hsa-miR-96-5p	<a href="#">TMEM52B</a>	transmembrane protein 52B
<a href="#">Details</a>	368	84	hsa-miR-96-5p	<a href="#">UCK2</a>	uridine-cytidine kinase 2
<a href="#">Details</a>	369	84	hsa-miR-96-5p	<a href="#">SLC35A1</a>	solute carrier family 35 member A1
<a href="#">Details</a>	370	84	hsa-miR-96-5p	<a href="#">AHR</a>	aryl hydrocarbon receptor
<a href="#">Details</a>	371	84	hsa-miR-96-5p	<a href="#">CLOCK</a>	clock circadian regulator
<a href="#">Details</a>	372	84	hsa-miR-96-5p	<a href="#">INSIG2</a>	insulin induced gene 2
<a href="#">Details</a>	373	84	hsa-miR-96-5p	<a href="#">JPT2</a>	Jupiter microtubule associated homolog 2
<a href="#">Details</a>	374	84	hsa-miR-96-5p	<a href="#">LNX2</a>	ligand of numb-protein X 2
<a href="#">Details</a>	375	84	hsa-miR-96-5p	<a href="#">GNAI3</a>	G protein subunit alpha i3
<a href="#">Details</a>	376	84	hsa-miR-96-5p	<a href="#">HDAC7</a>	histone deacetylase 7
<a href="#">Details</a>	377	84	hsa-miR-96-5p	<a href="#">MAGEL2</a>	MAGE family member L2
<a href="#">Details</a>	378	84	hsa-miR-96-5p	<a href="#">POU2F2</a>	POU class 2 homeobox 2
<a href="#">Details</a>	379	84	hsa-miR-96-5p	<a href="#">TPR</a>	translocated promoter region, nuclear basket protein
<a href="#">Details</a>	380	83	hsa-miR-96-5p	<a href="#">USP45</a>	ubiquitin specific peptidase 45
<a href="#">Details</a>	381	83	hsa-miR-96-5p	<a href="#">RNF183</a>	ring finger protein 183
<a href="#">Details</a>	382	83	hsa-miR-96-5p	<a href="#">ZIC2</a>	Zic family member 2
<a href="#">Details</a>	383	83	hsa-miR-96-5p	<a href="#">CDK18</a>	cyclin dependent kinase 18
<a href="#">Details</a>	384	83	hsa-miR-96-5p	<a href="#">PPP1R11</a>	protein phosphatase 1 regulatory inhibitor subunit 11
<a href="#">Details</a>	385	83	hsa-miR-96-5p	<a href="#">MTDH</a>	metadherin
<a href="#">Details</a>	386	83	hsa-miR-96-5p	<a href="#">FAM43A</a>	family with sequence similarity 43 member A
<a href="#">Details</a>	387	83	hsa-miR-96-5p	<a href="#">LHX1</a>	LIM homeobox 1
<a href="#">Details</a>	388	83	hsa-miR-96-5p	<a href="#">ADD3</a>	adducin 3
<a href="#">Details</a>	389	83	hsa-miR-96-5p	<a href="#">ADGRA2</a>	adhesion G protein-coupled receptor A2
<a href="#">Details</a>	390	83	hsa-miR-96-5p	<a href="#">RIOX1</a>	ribosomal oxygenase 1
<a href="#">Details</a>	391	83	hsa-miR-96-5p	<a href="#">AATK</a>	apoptosis associated tyrosine kinase
<a href="#">Details</a>	392	83	hsa-miR-96-5p	<a href="#">PSME4</a>	proteasome activator subunit 4
<a href="#">Details</a>	393	83	hsa-miR-96-5p	<a href="#">SCYL3</a>	SCY1 like pseudokinase 3
<a href="#">Details</a>	394	83	hsa-miR-96-5p	<a href="#">EIF3J</a>	eukaryotic translation initiation factor 3 subunit J
<a href="#">Details</a>	395	83	hsa-miR-96-5p	<a href="#">PC</a>	pyruvate carboxylase
<a href="#">Details</a>	396	83	hsa-miR-96-5p	<a href="#">ZNF850</a>	zinc finger protein 850
<a href="#">Details</a>	397	83	hsa-miR-96-5p	<a href="#">REPS2</a>	RALBP1 associated Eps domain containing 2
<a href="#">Details</a>	398	83	hsa-miR-96-5p	<a href="#">TBL1X</a>	transducin beta like 1 X-linked
<a href="#">Details</a>	399	83	hsa-miR-96-5p	<a href="#">SLITRK4</a>	SLIT and NTRK like family member 4
<a href="#">Details</a>	400	83	hsa-miR-96-5p	<a href="#">DENND2C</a>	DENN domain containing 2C
<a href="#">Details</a>	401	83	hsa-miR-96-5p	<a href="#">ATG16L1</a>	autophagy related 16 like 1
<a href="#">Details</a>	402	83	hsa-miR-96-5p	<a href="#">PDZRN4</a>	PDZ domain containing ring finger 4
<a href="#">Details</a>	403	83	hsa-miR-96-5p	<a href="#">KCTD2</a>	potassium channel tetramerization domain containing 2
<a href="#">Details</a>	404	82	hsa-miR-96-5p	<a href="#">PIK3R1</a>	phosphoinositide-3-kinase regulatory subunit 1
<a href="#">Details</a>	405	82	hsa-miR-96-5p	<a href="#">FKBP7</a>	FKBP prolyl isomerase 7
<a href="#">Details</a>	406	82	hsa-miR-96-5p	<a href="#">OTUD6B</a>	OTU domain containing 6B
<a href="#">Details</a>	407	82	hsa-miR-96-5p	<a href="#">NEUROD4</a>	neuronal differentiation 4

<a href="#">Details</a>	408	82	hsa-miR-96-5p	<a href="#">CREBRF</a>	CREB3 regulatory factor
<a href="#">Details</a>	409	82	hsa-miR-96-5p	<a href="#">BICD2</a>	BICD cargo adaptor 2
<a href="#">Details</a>	410	82	hsa-miR-96-5p	<a href="#">GABRB1</a>	gamma-aminobutyric acid type A receptor beta1 subunit
<a href="#">Details</a>	411	82	hsa-miR-96-5p	<a href="#">GNAO1</a>	G protein subunit alpha o1
<a href="#">Details</a>	412	82	hsa-miR-96-5p	<a href="#">PGAP1</a>	post-GPI attachment to proteins 1
<a href="#">Details</a>	413	82	hsa-miR-96-5p	<a href="#">ATG9A</a>	autophagy related 9A
<a href="#">Details</a>	414	82	hsa-miR-96-5p	<a href="#">SAR1B</a>	secretion associated Ras related GTPase 1B
<a href="#">Details</a>	415	82	hsa-miR-96-5p	<a href="#">HBP1</a>	HMG-box transcription factor 1
<a href="#">Details</a>	416	82	hsa-miR-96-5p	<a href="#">RFTN1</a>	raftlin, lipid raft linker 1
<a href="#">Details</a>	417	82	hsa-miR-96-5p	<a href="#">OLFM1</a>	olfactomedin 1
<a href="#">Details</a>	418	82	hsa-miR-96-5p	<a href="#">SHC4</a>	SHC adaptor protein 4
<a href="#">Details</a>	419	82	hsa-miR-96-5p	<a href="#">CAMKK2</a>	calcium/calmodulin dependent protein kinase kinase 2
<a href="#">Details</a>	420	82	hsa-miR-96-5p	<a href="#">CELSR1</a>	cadherin EGF LAG seven-pass G-type receptor 1
<a href="#">Details</a>	421	82	hsa-miR-96-5p	<a href="#">FZD3</a>	frizzled class receptor 3
<a href="#">Details</a>	422	82	hsa-miR-96-5p	<a href="#">LDB3</a>	LIM domain binding 3
<a href="#">Details</a>	423	81	hsa-miR-96-5p	<a href="#">TRIO</a>	trio Rho guanine nucleotide exchange factor
<a href="#">Details</a>	424	81	hsa-miR-96-5p	<a href="#">ERC2</a>	ELKS/RAB6-interacting/CAST family member 2
<a href="#">Details</a>	425	81	hsa-miR-96-5p	<a href="#">DEPDC1</a>	DEP domain containing 1
<a href="#">Details</a>	426	81	hsa-miR-96-5p	<a href="#">DDHD1</a>	DDHD domain containing 1
<a href="#">Details</a>	427	81	hsa-miR-96-5p	<a href="#">EDNRB</a>	endothelin receptor type B
<a href="#">Details</a>	428	81	hsa-miR-96-5p	<a href="#">SLC9A2</a>	solute carrier family 9 member A2
<a href="#">Details</a>	429	81	hsa-miR-96-5p	<a href="#">NDST1</a>	N-deacetylase and N-sulfotransferase 1
<a href="#">Details</a>	430	81	hsa-miR-96-5p	<a href="#">RASA1</a>	RAS p21 protein activator 1
<a href="#">Details</a>	431	81	hsa-miR-96-5p	<a href="#">TRABD2B</a>	TraB domain containing 2B
<a href="#">Details</a>	432	81	hsa-miR-96-5p	<a href="#">PCCA</a>	propionyl-CoA carboxylase subunit alpha
<a href="#">Details</a>	433	81	hsa-miR-96-5p	<a href="#">ELAVL4</a>	ELAV like RNA binding protein 4
<a href="#">Details</a>	434	81	hsa-miR-96-5p	<a href="#">RAB35</a>	RAB35, member RAS oncogene family
<a href="#">Details</a>	435	81	hsa-miR-96-5p	<a href="#">ELOVL5</a>	ELOVL fatty acid elongase 5
<a href="#">Details</a>	436	81	hsa-miR-96-5p	<a href="#">SLC18A3</a>	solute carrier family 18 member A3
<a href="#">Details</a>	437	81	hsa-miR-96-5p	<a href="#">NHLRC3</a>	NHL repeat containing 3
<a href="#">Details</a>	438	81	hsa-miR-96-5p	<a href="#">FBXW11</a>	F-box and WD repeat domain containing 11
<a href="#">Details</a>	439	81	hsa-miR-96-5p	<a href="#">FAM216A</a>	family with sequence similarity 216 member A
<a href="#">Details</a>	440	81	hsa-miR-96-5p	<a href="#">MAP3K2</a>	mitogen-activated protein kinase kinase kinase 2
<a href="#">Details</a>	441	80	hsa-miR-96-5p	<a href="#">RAD23B</a>	RAD23 homolog B, nucleotide excision repair protein
<a href="#">Details</a>	442	80	hsa-miR-96-5p	<a href="#">CLN5</a>	CLN5, intracellular trafficking protein
<a href="#">Details</a>	443	80	hsa-miR-96-5p	<a href="#">CORO1C</a>	coronin 1C
<a href="#">Details</a>	444	80	hsa-miR-96-5p	<a href="#">IGSF11</a>	immunoglobulin superfamily member 11
<a href="#">Details</a>	445	80	hsa-miR-96-5p	<a href="#">DHCR24</a>	24-dehydrocholesterol reductase
<a href="#">Details</a>	446	80	hsa-miR-96-5p	<a href="#">ADAM23</a>	ADAM metallopeptidase domain 23
<a href="#">Details</a>	447	80	hsa-miR-96-5p	<a href="#">GPHN</a>	gephyrin
<a href="#">Details</a>	448	80	hsa-miR-96-5p	<a href="#">TLL1</a>	tolloid like 1
<a href="#">Details</a>	449	80	hsa-miR-96-5p	<a href="#">SP3</a>	Sp3 transcription factor
<a href="#">Details</a>	450	80	hsa-miR-96-5p	<a href="#">FAM168A</a>	family with sequence similarity 168 member A
<a href="#">Details</a>	451	80	hsa-miR-96-5p	<a href="#">MAPRE1</a>	microtubule associated protein RP/EB family member 1
<a href="#">Details</a>	452	80	hsa-miR-96-5p	<a href="#">SIK3</a>	SIK family kinase 3

<a href="#">Details</a>	453	80	hsa-miR-96-5p	<a href="#">SELENOI</a>	selenoprotein I
<a href="#">Details</a>	454	80	hsa-miR-96-5p	<a href="#">LUZP1</a>	leucine zipper protein 1
<a href="#">Details</a>	455	80	hsa-miR-96-5p	<a href="#">ANKRD52</a>	ankyrin repeat domain 52
<a href="#">Details</a>	456	80	hsa-miR-96-5p	<a href="#">REEP1</a>	receptor accessory protein 1
<a href="#">Details</a>	457	80	hsa-miR-96-5p	<a href="#">KCNJ14</a>	potassium voltage-gated channel subfamily J member 14
<a href="#">Details</a>	458	80	hsa-miR-96-5p	<a href="#">CPEB1</a>	cytoplasmic polyadenylation element binding protein 1
<a href="#">Details</a>	459	80	hsa-miR-96-5p	<a href="#">TSKU</a>	tsukushi, small leucine rich proteoglycan
<a href="#">Details</a>	460	80	hsa-miR-96-5p	<a href="#">MIEF2</a>	mitochondrial elongation factor 2
<a href="#">Details</a>	461	80	hsa-miR-96-5p	<a href="#">CLVS2</a>	clavesin 2
<a href="#">Details</a>	462	80	hsa-miR-96-5p	<a href="#">FBXO41</a>	F-box protein 41
<a href="#">Details</a>	463	80	hsa-miR-96-5p	<a href="#">CREB1</a>	cAMP responsive element binding protein 1
<a href="#">Details</a>	464	80	hsa-miR-96-5p	<a href="#">HRASLS5</a>	HRAS like suppressor family member 5
<a href="#">Details</a>	465	79	hsa-miR-96-5p	<a href="#">SYT16</a>	synaptotagmin 16
<a href="#">Details</a>	466	79	hsa-miR-96-5p	<a href="#">MAGI1</a>	membrane associated guanylate kinase, WW and PDZ domain containing 1
<a href="#">Details</a>	467	79	hsa-miR-96-5p	<a href="#">FOXP2</a>	forkhead box P2
<a href="#">Details</a>	468	79	hsa-miR-96-5p	<a href="#">CACNB1</a>	calcium voltage-gated channel auxiliary subunit beta 1
<a href="#">Details</a>	469	79	hsa-miR-96-5p	<a href="#">ZPBP</a>	zona pellucida binding protein
<a href="#">Details</a>	470	79	hsa-miR-96-5p	<a href="#">DEGS1</a>	delta 4-desaturase, sphingolipid 1
<a href="#">Details</a>	471	79	hsa-miR-96-5p	<a href="#">DIXDC1</a>	DIX domain containing 1
<a href="#">Details</a>	472	79	hsa-miR-96-5p	<a href="#">CADM1</a>	cell adhesion molecule 1
<a href="#">Details</a>	473	79	hsa-miR-96-5p	<a href="#">FOXO4</a>	forkhead box O4
<a href="#">Details</a>	474	79	hsa-miR-96-5p	<a href="#">TMEM50B</a>	transmembrane protein 50B
<a href="#">Details</a>	475	79	hsa-miR-96-5p	<a href="#">ATP8A1</a>	ATPase phospholipid transporting 8A1
<a href="#">Details</a>	476	79	hsa-miR-96-5p	<a href="#">NLN</a>	neurolysin
<a href="#">Details</a>	477	79	hsa-miR-96-5p	<a href="#">DNAJC30</a>	DnaJ heat shock protein family (Hsp40) member C30
<a href="#">Details</a>	478	79	hsa-miR-96-5p	<a href="#">CAMSAP2</a>	calmodulin regulated spectrin associated protein family member 2
<a href="#">Details</a>	479	79	hsa-miR-96-5p	<a href="#">DDIT3</a>	DNA damage inducible transcript 3
<a href="#">Details</a>	480	79	hsa-miR-96-5p	<a href="#">GID4</a>	GID complex subunit 4 homolog
<a href="#">Details</a>	481	79	hsa-miR-96-5p	<a href="#">ASTN1</a>	astrotactin 1
<a href="#">Details</a>	482	79	hsa-miR-96-5p	<a href="#">EZR</a>	ezrin
<a href="#">Details</a>	483	79	hsa-miR-96-5p	<a href="#">KIDINS220</a>	kinase D interacting substrate 220
<a href="#">Details</a>	484	79	hsa-miR-96-5p	<a href="#">GPM6A</a>	glycoprotein M6A
<a href="#">Details</a>	485	79	hsa-miR-96-5p	<a href="#">ZNF10</a>	zinc finger protein 10
<a href="#">Details</a>	486	78	hsa-miR-96-5p	<a href="#">TSGA10</a>	testis specific 10
<a href="#">Details</a>	487	78	hsa-miR-96-5p	<a href="#">RAB7A</a>	RAB7A, member RAS oncogene family
<a href="#">Details</a>	488	78	hsa-miR-96-5p	<a href="#">CELF2</a>	CUGBP Elav-like family member 2
<a href="#">Details</a>	489	78	hsa-miR-96-5p	<a href="#">PCNX1</a>	pecanex 1
<a href="#">Details</a>	490	78	hsa-miR-96-5p	<a href="#">RDH10</a>	retinol dehydrogenase 10
<a href="#">Details</a>	491	78	hsa-miR-96-5p	<a href="#">DGCR2</a>	DiGeorge syndrome critical region gene 2
<a href="#">Details</a>	492	78	hsa-miR-96-5p	<a href="#">NAMPT</a>	nicotinamide phosphoribosyltransferase
<a href="#">Details</a>	493	78	hsa-miR-96-5p	<a href="#">KLHL8</a>	kelch like family member 8
<a href="#">Details</a>	494	78	hsa-miR-96-5p	<a href="#">FADS1</a>	fatty acid desaturase 1
<a href="#">Details</a>	495	78	hsa-miR-96-5p	<a href="#">MTMR12</a>	myotubularin related protein 12
<a href="#">Details</a>	496	78	hsa-miR-96-5p	<a href="#">EEF1E1</a>	eukaryotic translation elongation factor 1 epsilon 1
<a href="#">Details</a>	497	78	hsa-miR-96-5p	<a href="#">MOB1B</a>	MOB kinase activator 1B
<a href="#">Details</a>	498	78	hsa-miR-96-5p	<a href="#">DSCAM</a>	DS cell adhesion molecule
<a href="#">Details</a>	499	78	hsa-miR-96-5p	<a href="#">MRTFB</a>	myocardin related transcription factor B
<a href="#">Details</a>	500	78	hsa-miR-96-5p	<a href="#">ZNF449</a>	zinc finger protein 449
<a href="#">Details</a>	501	78	hsa-miR-96-5p	<a href="#">NSUN6</a>	NOP2/Sun RNA methyltransferase family

				member 6
<a href="#">Details</a>	502	78	hsa-miR-96-5p	<a href="#">CLSPN</a> claspin
<a href="#">Details</a>	503	78	hsa-miR-96-5p	<a href="#">CGGBP1</a> CGG triplet repeat binding protein 1
<a href="#">Details</a>	504	78	hsa-miR-96-5p	<a href="#">RND3</a> Rho family GTPase 3
<a href="#">Details</a>	505	78	hsa-miR-96-5p	<a href="#">CDK6</a> cyclin dependent kinase 6
<a href="#">Details</a>	506	78	hsa-miR-96-5p	<a href="#">AMOTL2</a> angiotonin like 2
<a href="#">Details</a>	507	78	hsa-miR-96-5p	<a href="#">ZC3H12C</a> zinc finger CCCH-type containing 12C
<a href="#">Details</a>	508	78	hsa-miR-96-5p	<a href="#">FYN</a> FYN proto-oncogene, Src family tyrosine kinase
<a href="#">Details</a>	509	77	hsa-miR-96-5p	<a href="#">MTRR</a> 5-methyltetrahydrofolate-homocysteine methyltransferase reductase
<a href="#">Details</a>	510	77	hsa-miR-96-5p	<a href="#">C10orf67</a> chromosome 10 open reading frame 67
<a href="#">Details</a>	511	77	hsa-miR-96-5p	<a href="#">TBX5</a> T-box 5
<a href="#">Details</a>	512	77	hsa-miR-96-5p	<a href="#">TBX1</a> T-box 1
<a href="#">Details</a>	513	77	hsa-miR-96-5p	<a href="#">OSBPL10</a> oxysterol binding protein like 10
<a href="#">Details</a>	514	77	hsa-miR-96-5p	<a href="#">TBX15</a> T-box 15
<a href="#">Details</a>	515	77	hsa-miR-96-5p	<a href="#">STK35</a> serine/threonine kinase 35
<a href="#">Details</a>	516	77	hsa-miR-96-5p	<a href="#">GPRC5B</a> G protein-coupled receptor class C group 5 member B
<a href="#">Details</a>	517	77	hsa-miR-96-5p	<a href="#">TENM4</a> teneurin transmembrane protein 4
<a href="#">Details</a>	518	77	hsa-miR-96-5p	<a href="#">CTNND1</a> catenin delta 1
<a href="#">Details</a>	519	77	hsa-miR-96-5p	<a href="#">SLC36A2</a> solute carrier family 36 member 2
<a href="#">Details</a>	520	76	hsa-miR-96-5p	<a href="#">SLC10A3</a> solute carrier family 10 member 3
<a href="#">Details</a>	521	76	hsa-miR-96-5p	<a href="#">SEPT11</a> septin 11
<a href="#">Details</a>	522	76	hsa-miR-96-5p	<a href="#">CACNA2D1</a> calcium voltage-gated channel auxiliary subunit alpha2delta 1
<a href="#">Details</a>	523	76	hsa-miR-96-5p	<a href="#">KCNC2</a> potassium voltage-gated channel subfamily C member 2
<a href="#">Details</a>	524	76	hsa-miR-96-5p	<a href="#">TNFSF4</a> TNF superfamily member 4
<a href="#">Details</a>	525	76	hsa-miR-96-5p	<a href="#">TGFBR1</a> transforming growth factor beta receptor 1
<a href="#">Details</a>	526	76	hsa-miR-96-5p	<a href="#">ARHGAP24</a> Rho GTPase activating protein 24
<a href="#">Details</a>	527	76	hsa-miR-96-5p	<a href="#">MEF2C</a> myocyte enhancer factor 2C
<a href="#">Details</a>	528	76	hsa-miR-96-5p	<a href="#">FHL1</a> four and a half LIM domains 1
<a href="#">Details</a>	529	76	hsa-miR-96-5p	<a href="#">RPL36A-HNRNPH2</a> RPL36A-HNRNPH2 readthrough
<a href="#">Details</a>	530	76	hsa-miR-96-5p	<a href="#">BCAT2</a> branched chain amino acid transaminase 2
<a href="#">Details</a>	531	76	hsa-miR-96-5p	<a href="#">CBX2</a> chromobox 2
<a href="#">Details</a>	532	76	hsa-miR-96-5p	<a href="#">CCSER2</a> coiled-coil serine rich protein 2
<a href="#">Details</a>	533	76	hsa-miR-96-5p	<a href="#">ULBP1</a> UL16 binding protein 1
<a href="#">Details</a>	534	76	hsa-miR-96-5p	<a href="#">VCPIP1</a> valosin containing protein interacting protein 1
<a href="#">Details</a>	535	76	hsa-miR-96-5p	<a href="#">DMRT3</a> doublesex and mab-3 related transcription factor 3
<a href="#">Details</a>	536	76	hsa-miR-96-5p	<a href="#">RGPD2</a> RANBP2-like and GRIP domain containing 2
<a href="#">Details</a>	537	76	hsa-miR-96-5p	<a href="#">VSIG10</a> V-set and immunoglobulin domain containing 10
<a href="#">Details</a>	538	76	hsa-miR-96-5p	<a href="#">PLPBP</a> pyridoxal phosphate binding protein
<a href="#">Details</a>	539	75	hsa-miR-96-5p	<a href="#">STARD7</a> StAR related lipid transfer domain containing 7
<a href="#">Details</a>	540	75	hsa-miR-96-5p	<a href="#">MAB21L2</a> mab-21 like 2
<a href="#">Details</a>	541	75	hsa-miR-96-5p	<a href="#">MBLAC2</a> metallo-beta-lactamase domain containing 2
<a href="#">Details</a>	542	75	hsa-miR-96-5p	<a href="#">HDHD2</a> haloacid dehalogenase like hydrolase domain containing 2
<a href="#">Details</a>	543	75	hsa-miR-96-5p	<a href="#">CHMP4A</a> charged multivesicular body protein 4A
<a href="#">Details</a>	544	75	hsa-miR-96-5p	<a href="#">ALDH6A1</a> aldehyde dehydrogenase 6 family member A1

<a href="#">Details</a>	545	75	hsa-miR-96-5p	<a href="#">RNF169</a>	ring finger protein 169
<a href="#">Details</a>	546	75	hsa-miR-96-5p	<a href="#">CASTOR2</a>	cytosolic arginine sensor for mTORC1 subunit 2
<a href="#">Details</a>	547	75	hsa-miR-96-5p	<a href="#">SHOX2</a>	short stature homeobox 2
<a href="#">Details</a>	548	75	hsa-miR-96-5p	<a href="#">GNE</a>	glucosamine (UDP-N-acetyl)-2-epimerase/N-acetylmannosamine kinase
<a href="#">Details</a>	549	75	hsa-miR-96-5p	<a href="#">MYB</a>	MYB proto-oncogene, transcription factor
<a href="#">Details</a>	550	75	hsa-miR-96-5p	<a href="#">SEMA6A</a>	semaphorin 6A
<a href="#">Details</a>	551	75	hsa-miR-96-5p	<a href="#">VANGL2</a>	VANGL planar cell polarity protein 2
<a href="#">Details</a>	552	75	hsa-miR-96-5p	<a href="#">BMPR1B</a>	bone morphogenetic protein receptor type 1B
<a href="#">Details</a>	553	75	hsa-miR-96-5p	<a href="#">UGT8</a>	UDP glycosyltransferase 8
<a href="#">Details</a>	554	75	hsa-miR-96-5p	<a href="#">MMS22L</a>	MMS22 like, DNA repair protein
<a href="#">Details</a>	555	75	hsa-miR-96-5p	<a href="#">PLOD3</a>	procollagen-lysine,2-oxoglutarate 5-dioxygenase 3
<a href="#">Details</a>	556	75	hsa-miR-96-5p	<a href="#">RCC2</a>	regulator of chromosome condensation 2
<a href="#">Details</a>	557	75	hsa-miR-96-5p	<a href="#">MYOCD</a>	myocardin
<a href="#">Details</a>	558	75	hsa-miR-96-5p	<a href="#">NIPA1</a>	NIPA magnesium transporter 1
<a href="#">Details</a>	559	75	hsa-miR-96-5p	<a href="#">RIOK3</a>	RIO kinase 3
<a href="#">Details</a>	560	74	hsa-miR-96-5p	<a href="#">RECK</a>	reversion inducing cysteine rich protein with kazal motifs
<a href="#">Details</a>	561	74	hsa-miR-96-5p	<a href="#">MAGI3</a>	membrane associated guanylate kinase, WW and PDZ domain containing 3
<a href="#">Details</a>	562	74	hsa-miR-96-5p	<a href="#">NAA50</a>	N(alpha)-acetyltransferase 50, NatE catalytic subunit
<a href="#">Details</a>	563	74	hsa-miR-96-5p	<a href="#">FAM110B</a>	family with sequence similarity 110 member B
<a href="#">Details</a>	564	74	hsa-miR-96-5p	<a href="#">RABGAP1</a>	RAB GTPase activating protein 1
<a href="#">Details</a>	565	74	hsa-miR-96-5p	<a href="#">UMAD1</a>	UBAP1-MVB12-associated (UMA) domain containing 1
<a href="#">Details</a>	566	74	hsa-miR-96-5p	<a href="#">OPN5</a>	opsin 5
<a href="#">Details</a>	567	74	hsa-miR-96-5p	<a href="#">ONECUT2</a>	one cut homeobox 2
<a href="#">Details</a>	568	74	hsa-miR-96-5p	<a href="#">PTH</a>	parathyroid hormone
<a href="#">Details</a>	569	74	hsa-miR-96-5p	<a href="#">RAB27B</a>	RAB27B, member RAS oncogene family
<a href="#">Details</a>	570	74	hsa-miR-96-5p	<a href="#">INO80D</a>	INO80 complex subunit D
<a href="#">Details</a>	571	74	hsa-miR-96-5p	<a href="#">SPATS2L</a>	spermatogenesis associated serine rich 2 like
<a href="#">Details</a>	572	74	hsa-miR-96-5p	<a href="#">CEP19</a>	centrosomal protein 19
<a href="#">Details</a>	573	74	hsa-miR-96-5p	<a href="#">NF1</a>	neurofibromin 1
<a href="#">Details</a>	574	74	hsa-miR-96-5p	<a href="#">GRK3</a>	G protein-coupled receptor kinase 3
<a href="#">Details</a>	575	74	hsa-miR-96-5p	<a href="#">TMEM140</a>	transmembrane protein 140
<a href="#">Details</a>	576	74	hsa-miR-96-5p	<a href="#">PAPPA</a>	pappalysin 1
<a href="#">Details</a>	577	74	hsa-miR-96-5p	<a href="#">INA</a>	internexin neuronal intermediate filament protein alpha
<a href="#">Details</a>	578	74	hsa-miR-96-5p	<a href="#">NHLH2</a>	nescient helix-loop-helix 2
<a href="#">Details</a>	579	74	hsa-miR-96-5p	<a href="#">CLCN5</a>	chloride voltage-gated channel 5
<a href="#">Details</a>	580	74	hsa-miR-96-5p	<a href="#">ELL</a>	elongation factor for RNA polymerase II
<a href="#">Details</a>	581	74	hsa-miR-96-5p	<a href="#">HDAC9</a>	histone deacetylase 9
<a href="#">Details</a>	582	74	hsa-miR-96-5p	<a href="#">SLMAP</a>	sarcolemma associated protein
<a href="#">Details</a>	583	74	hsa-miR-96-5p	<a href="#">SMIM13</a>	small integral membrane protein 13
<a href="#">Details</a>	584	74	hsa-miR-96-5p	<a href="#">INPP5A</a>	inositol polyphosphate-5-phosphatase A
<a href="#">Details</a>	585	74	hsa-miR-96-5p	<a href="#">MAP4K4</a>	mitogen-activated protein kinase kinase kinase 4
<a href="#">Details</a>	586	74	hsa-miR-96-5p	<a href="#">RHOJ</a>	ras homolog family member J
<a href="#">Details</a>	587	74	hsa-miR-96-5p	<a href="#">UNC5D</a>	unc-5 netrin receptor D
<a href="#">Details</a>	588	73	hsa-miR-96-5p	<a href="#">N4BP1</a>	NEDD4 binding protein 1
<a href="#">Details</a>	589	73	hsa-miR-96-5p	<a href="#">FLOT1</a>	flotillin 1

<a href="#">Details</a>	590	73	hsa-miR-96-5p	<a href="#">RAB6B</a>	RAB6B, member RAS oncogene family
<a href="#">Details</a>	591	73	hsa-miR-96-5p	<a href="#">OPN1MW2</a>	opsin 1, medium wave sensitive 2
<a href="#">Details</a>	592	73	hsa-miR-96-5p	<a href="#">CDV3</a>	CDV3 homolog
<a href="#">Details</a>	593	73	hsa-miR-96-5p	<a href="#">MFHAS1</a>	malignant fibrous histiocytoma amplified sequence 1
<a href="#">Details</a>	594	73	hsa-miR-96-5p	<a href="#">KTN1</a>	kinectin 1
<a href="#">Details</a>	595	73	hsa-miR-96-5p	<a href="#">PCDH11X</a>	protocadherin 11 X-linked
<a href="#">Details</a>	596	73	hsa-miR-96-5p	<a href="#">PLPPR2</a>	phospholipid phosphatase related 2
<a href="#">Details</a>	597	73	hsa-miR-96-5p	<a href="#">RYR3</a>	ryanodine receptor 3
<a href="#">Details</a>	598	73	hsa-miR-96-5p	<a href="#">PROK2</a>	prokineticin 2
<a href="#">Details</a>	599	73	hsa-miR-96-5p	<a href="#">DCX</a>	doublecortin
<a href="#">Details</a>	600	73	hsa-miR-96-5p	<a href="#">CTXN2</a>	cortexin 2
<a href="#">Details</a>	601	73	hsa-miR-96-5p	<a href="#">ZFAND4</a>	zinc finger AN1-type containing 4
<a href="#">Details</a>	602	73	hsa-miR-96-5p	<a href="#">GPR85</a>	G protein-coupled receptor 85
<a href="#">Details</a>	603	73	hsa-miR-96-5p	<a href="#">FXR1</a>	FMR1 autosomal homolog 1
<a href="#">Details</a>	604	73	hsa-miR-96-5p	<a href="#">TMEM245</a>	transmembrane protein 245
<a href="#">Details</a>	605	73	hsa-miR-96-5p	<a href="#">CD36</a>	CD36 molecule
<a href="#">Details</a>	606	73	hsa-miR-96-5p	<a href="#">CAMTA1</a>	calmodulin binding transcription activator 1
<a href="#">Details</a>	607	73	hsa-miR-96-5p	<a href="#">PCDH11Y</a>	protocadherin 11 Y-linked
<a href="#">Details</a>	608	73	hsa-miR-96-5p	<a href="#">ARHGAP12</a>	Rho GTPase activating protein 12
<a href="#">Details</a>	609	73	hsa-miR-96-5p	<a href="#">RPAP3</a>	RNA polymerase II associated protein 3
<a href="#">Details</a>	610	73	hsa-miR-96-5p	<a href="#">ADGRF5</a>	adhesion G protein-coupled receptor F5
<a href="#">Details</a>	611	73	hsa-miR-96-5p	<a href="#">OPN1LW</a>	opsin 1, long wave sensitive
<a href="#">Details</a>	612	73	hsa-miR-96-5p	<a href="#">SLC25A1</a>	solute carrier family 25 member 1
<a href="#">Details</a>	613	72	hsa-miR-96-5p	<a href="#">INTS6</a>	integrator complex subunit 6
<a href="#">Details</a>	614	72	hsa-miR-96-5p	<a href="#">TANC1</a>	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 1
<a href="#">Details</a>	615	72	hsa-miR-96-5p	<a href="#">MFSD5</a>	major facilitator superfamily domain containing 5
<a href="#">Details</a>	616	72	hsa-miR-96-5p	<a href="#">APBB2</a>	amyloid beta precursor protein binding family B member 2
<a href="#">Details</a>	617	72	hsa-miR-96-5p	<a href="#">TMEM19</a>	transmembrane protein 19
<a href="#">Details</a>	618	72	hsa-miR-96-5p	<a href="#">JAZF1</a>	JAZF zinc finger 1
<a href="#">Details</a>	619	72	hsa-miR-96-5p	<a href="#">TM4SF20</a>	transmembrane 4 L six family member 20
<a href="#">Details</a>	620	72	hsa-miR-96-5p	<a href="#">UNC13B</a>	unc-13 homolog B
<a href="#">Details</a>	621	72	hsa-miR-96-5p	<a href="#">LIMS1</a>	LIM zinc finger domain containing 1
<a href="#">Details</a>	622	72	hsa-miR-96-5p	<a href="#">SLC26A4</a>	solute carrier family 26 member 4
<a href="#">Details</a>	623	72	hsa-miR-96-5p	<a href="#">NR4A3</a>	nuclear receptor subfamily 4 group A member 3
<a href="#">Details</a>	624	72	hsa-miR-96-5p	<a href="#">TMEM145</a>	transmembrane protein 145
<a href="#">Details</a>	625	72	hsa-miR-96-5p	<a href="#">C1GALT1</a>	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase 1
<a href="#">Details</a>	626	72	hsa-miR-96-5p	<a href="#">GRM7</a>	glutamate metabotropic receptor 7
<a href="#">Details</a>	627	72	hsa-miR-96-5p	<a href="#">IQSEC1</a>	IQ motif and Sec7 domain 1
<a href="#">Details</a>	628	72	hsa-miR-96-5p	<a href="#">CLPTM1L</a>	CLPTM1 like
<a href="#">Details</a>	629	72	hsa-miR-96-5p	<a href="#">ACVR2B</a>	activin A receptor type 2B
<a href="#">Details</a>	630	72	hsa-miR-96-5p	<a href="#">SLC16A7</a>	solute carrier family 16 member 7
<a href="#">Details</a>	631	72	hsa-miR-96-5p	<a href="#">NPTX1</a>	neuronal pentraxin 1
<a href="#">Details</a>	632	71	hsa-miR-96-5p	<a href="#">MTCH2</a>	mitochondrial carrier 2
<a href="#">Details</a>	633	71	hsa-miR-96-5p	<a href="#">DERL2</a>	derlin 2
<a href="#">Details</a>	634	71	hsa-miR-96-5p	<a href="#">HOMER1</a>	homer scaffold protein 1
<a href="#">Details</a>	635	71	hsa-miR-96-5p	<a href="#">SLC43A2</a>	solute carrier family 43 member 2
<a href="#">Details</a>	636	71	hsa-miR-96-5p	<a href="#">DIPK2A</a>	divergent protein kinase domain 2A
<a href="#">Details</a>	637	71	hsa-miR-96-5p	<a href="#">TECTB</a>	tectorin beta
<a href="#">Details</a>	638	71	hsa-miR-96-5p	<a href="#">DCAF10</a>	DDB1 and CUL4 associated factor 10

<a href="#">Details</a>	639	71	hsa-miR-96-5p	<a href="#">TMEM92</a>	transmembrane protein 92
<a href="#">Details</a>	640	71	hsa-miR-96-5p	<a href="#">FRMPD4</a>	FERM and PDZ domain containing 4
<a href="#">Details</a>	641	71	hsa-miR-96-5p	<a href="#">FEM1C</a>	fem-1 homolog C
<a href="#">Details</a>	642	71	hsa-miR-96-5p	<a href="#">KCNN3</a>	potassium calcium-activated channel subfamily N member 3
<a href="#">Details</a>	643	70	hsa-miR-96-5p	<a href="#">TAB3</a>	TGF-beta activated kinase 1 (MAP3K7) binding protein 3
<a href="#">Details</a>	644	70	hsa-miR-96-5p	<a href="#">CUL4A</a>	cullin 4A
<a href="#">Details</a>	645	70	hsa-miR-96-5p	<a href="#">PJA2</a>	praja ring finger ubiquitin ligase 2
<a href="#">Details</a>	646	70	hsa-miR-96-5p	<a href="#">ABCA1</a>	ATP binding cassette subfamily A member 1
<a href="#">Details</a>	647	70	hsa-miR-96-5p	<a href="#">MECOM</a>	MDS1 and EVI1 complex locus
<a href="#">Details</a>	648	70	hsa-miR-96-5p	<a href="#">SLC2A3</a>	solute carrier family 2 member 3
<a href="#">Details</a>	649	70	hsa-miR-96-5p	<a href="#">SLC16A13</a>	solute carrier family 16 member 13
<a href="#">Details</a>	650	70	hsa-miR-96-5p	<a href="#">KCNK2</a>	potassium two pore domain channel subfamily K member 2
<a href="#">Details</a>	651	70	hsa-miR-96-5p	<a href="#">EVI5L</a>	ecotropic viral integration site 5 like
<a href="#">Details</a>	652	70	hsa-miR-96-5p	<a href="#">LIPG</a>	lipase G, endothelial type
<a href="#">Details</a>	653	70	hsa-miR-96-5p	<a href="#">BOD1L1</a>	biorientation of chromosomes in cell division 1 like 1
<a href="#">Details</a>	654	70	hsa-miR-96-5p	<a href="#">SPAG17</a>	sperm associated antigen 17
<a href="#">Details</a>	655	70	hsa-miR-96-5p	<a href="#">LRP6</a>	LDL receptor related protein 6
<a href="#">Details</a>	656	70	hsa-miR-96-5p	<a href="#">ULBP3</a>	UL16 binding protein 3
<a href="#">Details</a>	657	70	hsa-miR-96-5p	<a href="#">SLC22A23</a>	solute carrier family 22 member 23
<a href="#">Details</a>	658	70	hsa-miR-96-5p	<a href="#">CHAMP1</a>	chromosome alignment maintaining phosphoprotein 1
<a href="#">Details</a>	659	70	hsa-miR-96-5p	<a href="#">PIK3CA</a>	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
<a href="#">Details</a>	660	70	hsa-miR-96-5p	<a href="#">STMN2</a>	stathmin 2
<a href="#">Details</a>	661	70	hsa-miR-96-5p	<a href="#">VCL</a>	vinculin
<a href="#">Details</a>	662	70	hsa-miR-96-5p	<a href="#">ZBTB20</a>	zinc finger and BTB domain containing 20
<a href="#">Details</a>	663	70	hsa-miR-96-5p	<a href="#">GNA13</a>	G protein subunit alpha 13
<a href="#">Details</a>	664	70	hsa-miR-96-5p	<a href="#">MINDY3</a>	MINDY lysine 48 deubiquitinase 3
<a href="#">Details</a>	665	70	hsa-miR-96-5p	<a href="#">WDR72</a>	WD repeat domain 72
<a href="#">Details</a>	666	70	hsa-miR-96-5p	<a href="#">BSDC1</a>	BSD domain containing 1
<a href="#">Details</a>	667	70	hsa-miR-96-5p	<a href="#">ZNF577</a>	zinc finger protein 577
<a href="#">Details</a>	668	70	hsa-miR-96-5p	<a href="#">IPO9</a>	importin 9
<a href="#">Details</a>	669	70	hsa-miR-96-5p	<a href="#">PCDH17</a>	protocadherin 17
<a href="#">Details</a>	670	70	hsa-miR-96-5p	<a href="#">ALKBH1</a>	alkB homolog 1, histone H2A dioxygenase
<a href="#">Details</a>	671	70	hsa-miR-96-5p	<a href="#">TM9SF4</a>	transmembrane 9 superfamily member 4
<a href="#">Details</a>	672	70	hsa-miR-96-5p	<a href="#">SEC62</a>	SEC62 homolog, preprotein translocation factor
<a href="#">Details</a>	673	69	hsa-miR-96-5p	<a href="#">RUFY1</a>	RUN and FYVE domain containing 1
<a href="#">Details</a>	674	69	hsa-miR-96-5p	<a href="#">SLC1A2</a>	solute carrier family 1 member 2
<a href="#">Details</a>	675	69	hsa-miR-96-5p	<a href="#">FMR1</a>	fragile X mental retardation 1
<a href="#">Details</a>	676	69	hsa-miR-96-5p	<a href="#">DGKK</a>	diacylglycerol kinase kappa
<a href="#">Details</a>	677	69	hsa-miR-96-5p	<a href="#">ABAT</a>	4-aminobutyrate aminotransferase
<a href="#">Details</a>	678	69	hsa-miR-96-5p	<a href="#">MRPL42</a>	mitochondrial ribosomal protein L42
<a href="#">Details</a>	679	69	hsa-miR-96-5p	<a href="#">UPRT</a>	uracil phosphoribosyltransferase homolog
<a href="#">Details</a>	680	69	hsa-miR-96-5p	<a href="#">GNAQ</a>	G protein subunit alpha q
<a href="#">Details</a>	681	69	hsa-miR-96-5p	<a href="#">SMAD7</a>	SMAD family member 7
<a href="#">Details</a>	682	69	hsa-miR-96-5p	<a href="#">MAPK1IP1L</a>	mitogen-activated protein kinase 1 interacting protein 1 like
<a href="#">Details</a>	683	69	hsa-miR-96-5p	<a href="#">FBXO32</a>	F-box protein 32
<a href="#">Details</a>	684	69	hsa-miR-96-5p	<a href="#">SMC2</a>	structural maintenance of chromosomes 2
<a href="#">Details</a>	685	69	hsa-miR-96-5p	<a href="#">MAPK9</a>	mitogen-activated protein kinase 9

<a href="#">Details</a>	686	69	hsa-miR-96-5p	<a href="#">EPB41L3</a>	erythrocyte membrane protein band 4.1 like 3
<a href="#">Details</a>	687	69	hsa-miR-96-5p	<a href="#">TSNAX</a>	translin associated factor X
<a href="#">Details</a>	688	69	hsa-miR-96-5p	<a href="#">KIF19</a>	kinesin family member 19
<a href="#">Details</a>	689	69	hsa-miR-96-5p	<a href="#">TP53INP1</a>	tumor protein p53 inducible nuclear protein 1
<a href="#">Details</a>	690	69	hsa-miR-96-5p	<a href="#">SEC14L2</a>	SEC14 like lipid binding 2
<a href="#">Details</a>	691	69	hsa-miR-96-5p	<a href="#">ADAM22</a>	ADAM metallopeptidase domain 22
<a href="#">Details</a>	692	69	hsa-miR-96-5p	<a href="#">DSG2</a>	desmoglein 2
<a href="#">Details</a>	693	68	hsa-miR-96-5p	<a href="#">SGMS2</a>	sphingomyelin synthase 2
<a href="#">Details</a>	694	68	hsa-miR-96-5p	<a href="#">MYO16</a>	myosin XVI
<a href="#">Details</a>	695	68	hsa-miR-96-5p	<a href="#">ADRA2C</a>	adrenoceptor alpha 2C
<a href="#">Details</a>	696	68	hsa-miR-96-5p	<a href="#">DENND5A</a>	DENN domain containing 5A
<a href="#">Details</a>	697	68	hsa-miR-96-5p	<a href="#">ZIC3</a>	Zic family member 3
<a href="#">Details</a>	698	68	hsa-miR-96-5p	<a href="#">JKAMP</a>	JNK1/MAPK8 associated membrane protein
<a href="#">Details</a>	699	68	hsa-miR-96-5p	<a href="#">GRID1</a>	glutamate ionotropic receptor delta type subunit 1
<a href="#">Details</a>	700	68	hsa-miR-96-5p	<a href="#">RAPGEF5</a>	Rap guanine nucleotide exchange factor 5
<a href="#">Details</a>	701	68	hsa-miR-96-5p	<a href="#">TMEM163</a>	transmembrane protein 163
<a href="#">Details</a>	702	68	hsa-miR-96-5p	<a href="#">BRWD1</a>	bromodomain and WD repeat domain containing 1
<a href="#">Details</a>	703	68	hsa-miR-96-5p	<a href="#">PPP1R12A</a>	protein phosphatase 1 regulatory subunit 12A
<a href="#">Details</a>	704	68	hsa-miR-96-5p	<a href="#">MYO1C</a>	myosin IC
<a href="#">Details</a>	705	68	hsa-miR-96-5p	<a href="#">PARP15</a>	Poly(ADP-ribose) polymerase family member 15
<a href="#">Details</a>	706	68	hsa-miR-96-5p	<a href="#">CDC42BPB</a>	CDC42 binding protein kinase beta
<a href="#">Details</a>	707	68	hsa-miR-96-5p	<a href="#">ADGRL4</a>	adhesion G protein-coupled receptor L4
<a href="#">Details</a>	708	68	hsa-miR-96-5p	<a href="#">TMEM170A</a>	transmembrane protein 170A
<a href="#">Details</a>	709	67	hsa-miR-96-5p	<a href="#">COG3</a>	component of oligomeric golgi complex 3
<a href="#">Details</a>	710	67	hsa-miR-96-5p	<a href="#">CEP170</a>	centrosomal protein 170
<a href="#">Details</a>	711	67	hsa-miR-96-5p	<a href="#">TACC1</a>	transforming acidic coiled-coil containing protein 1
<a href="#">Details</a>	712	67	hsa-miR-96-5p	<a href="#">NAV3</a>	neuron navigator 3
<a href="#">Details</a>	713	67	hsa-miR-96-5p	<a href="#">ZNRF1</a>	zinc and ring finger 1
<a href="#">Details</a>	714	67	hsa-miR-96-5p	<a href="#">EGR3</a>	early growth response 3
<a href="#">Details</a>	715	67	hsa-miR-96-5p	<a href="#">MBD4</a>	methyl-CpG binding domain 4, DNA glycosylase
<a href="#">Details</a>	716	67	hsa-miR-96-5p	<a href="#">PPP1R1C</a>	protein phosphatase 1 regulatory inhibitor subunit 1C
<a href="#">Details</a>	717	67	hsa-miR-96-5p	<a href="#">CCNG1</a>	cyclin G1
<a href="#">Details</a>	718	67	hsa-miR-96-5p	<a href="#">GRK6</a>	G protein-coupled receptor kinase 6
<a href="#">Details</a>	719	67	hsa-miR-96-5p	<a href="#">LCOR</a>	ligand dependent nuclear receptor corepressor
<a href="#">Details</a>	720	67	hsa-miR-96-5p	<a href="#">GSTM2</a>	glutathione S-transferase mu 2
<a href="#">Details</a>	721	67	hsa-miR-96-5p	<a href="#">SYNE2</a>	spectrin repeat containing nuclear envelope protein 2
<a href="#">Details</a>	722	67	hsa-miR-96-5p	<a href="#">PMEPA1</a>	prostate transmembrane protein, androgen induced 1
<a href="#">Details</a>	723	67	hsa-miR-96-5p	<a href="#">PREPL</a>	prolyl endopeptidase like
<a href="#">Details</a>	724	66	hsa-miR-96-5p	<a href="#">ITGA6</a>	integrin subunit alpha 6
<a href="#">Details</a>	725	66	hsa-miR-96-5p	<a href="#">SNAI2</a>	snail family transcriptional repressor 2
<a href="#">Details</a>	726	66	hsa-miR-96-5p	<a href="#">SCN9A</a>	sodium voltage-gated channel alpha subunit 9
<a href="#">Details</a>	727	66	hsa-miR-96-5p	<a href="#">SLC35G1</a>	solute carrier family 35 member G1
<a href="#">Details</a>	728	66	hsa-miR-96-5p	<a href="#">ZFAT</a>	zinc finger and AT-hook domain containing
<a href="#">Details</a>	729	66	hsa-miR-96-5p	<a href="#">ANKRD44</a>	ankyrin repeat domain 44

<a href="#">Details</a>	730	66	hsa-miR-96-5p	<a href="#">RAB9B</a>	RAB9B, member RAS oncogene family
<a href="#">Details</a>	731	66	hsa-miR-96-5p	<a href="#">HOXA5</a>	homeobox A5
<a href="#">Details</a>	732	66	hsa-miR-96-5p	<a href="#">CCDC88C</a>	coiled-coil domain containing 88C
<a href="#">Details</a>	733	66	hsa-miR-96-5p	<a href="#">FAM53C</a>	family with sequence similarity 53 member C
<a href="#">Details</a>	734	66	hsa-miR-96-5p	<a href="#">PAX5</a>	paired box 5
<a href="#">Details</a>	735	66	hsa-miR-96-5p	<a href="#">YY1AP1</a>	YY1 associated protein 1
<a href="#">Details</a>	736	66	hsa-miR-96-5p	<a href="#">VLDLR</a>	very low density lipoprotein receptor
<a href="#">Details</a>	737	66	hsa-miR-96-5p	<a href="#">DKK2</a>	dickkopf WNT signaling pathway inhibitor 2
<a href="#">Details</a>	738	66	hsa-miR-96-5p	<a href="#">RHOBTB1</a>	Rho related BTB domain containing 1
<a href="#">Details</a>	739	66	hsa-miR-96-5p	<a href="#">SNX17</a>	sorting nexin 17
<a href="#">Details</a>	740	66	hsa-miR-96-5p	<a href="#">CNTNAP2</a>	contactin associated protein like 2
<a href="#">Details</a>	741	66	hsa-miR-96-5p	<a href="#">ZMYND19</a>	zinc finger MYND-type containing 19
<a href="#">Details</a>	742	66	hsa-miR-96-5p	<a href="#">SLCO3A1</a>	solute carrier organic anion transporter family member 3A1
<a href="#">Details</a>	743	66	hsa-miR-96-5p	<a href="#">MAP3K20</a>	mitogen-activated protein kinase kinase 20
<a href="#">Details</a>	744	65	hsa-miR-96-5p	<a href="#">C21orf91</a>	chromosome 21 open reading frame 91
<a href="#">Details</a>	745	65	hsa-miR-96-5p	<a href="#">IGDCC3</a>	immunoglobulin superfamily DCC subclass member 3
<a href="#">Details</a>	746	65	hsa-miR-96-5p	<a href="#">CD2AP</a>	CD2 associated protein
<a href="#">Details</a>	747	65	hsa-miR-96-5p	<a href="#">RYK</a>	receptor-like tyrosine kinase
<a href="#">Details</a>	748	65	hsa-miR-96-5p	<a href="#">SAMD12</a>	sterile alpha motif domain containing 12
<a href="#">Details</a>	749	65	hsa-miR-96-5p	<a href="#">WASL</a>	Wiskott-Aldrich syndrome like
<a href="#">Details</a>	750	65	hsa-miR-96-5p	<a href="#">TMEM150C</a>	transmembrane protein 150C
<a href="#">Details</a>	751	65	hsa-miR-96-5p	<a href="#">GPR137</a>	G protein-coupled receptor 137
<a href="#">Details</a>	752	65	hsa-miR-96-5p	<a href="#">NR1D2</a>	nuclear receptor subfamily 1 group D member 2
<a href="#">Details</a>	753	65	hsa-miR-96-5p	<a href="#">RAD51B</a>	RAD51 paralog B
<a href="#">Details</a>	754	65	hsa-miR-96-5p	<a href="#">PDE1C</a>	phosphodiesterase 1C
<a href="#">Details</a>	755	65	hsa-miR-96-5p	<a href="#">SKIL</a>	SKI like proto-oncogene
<a href="#">Details</a>	756	65	hsa-miR-96-5p	<a href="#">CD1D</a>	CD1d molecule
<a href="#">Details</a>	757	65	hsa-miR-96-5p	<a href="#">NOX4</a>	NADPH oxidase 4
<a href="#">Details</a>	758	65	hsa-miR-96-5p	<a href="#">EDEM3</a>	ER degradation enhancing alpha-mannosidase like protein 3
<a href="#">Details</a>	759	65	hsa-miR-96-5p	<a href="#">RAB40B</a>	RAB40B, member RAS oncogene family
<a href="#">Details</a>	760	65	hsa-miR-96-5p	<a href="#">MMAB</a>	metabolism of cobalamin associated B
<a href="#">Details</a>	761	65	hsa-miR-96-5p	<a href="#">PCMTD1</a>	protein-L-isoaspartate (D-aspartate) O-methyltransferase domain containing 1
<a href="#">Details</a>	762	65	hsa-miR-96-5p	<a href="#">CSRNP1</a>	cysteine and serine rich nuclear protein 1
<a href="#">Details</a>	763	65	hsa-miR-96-5p	<a href="#">PTPRG</a>	protein tyrosine phosphatase, receptor type G
<a href="#">Details</a>	764	65	hsa-miR-96-5p	<a href="#">RIMBP2</a>	RIMS binding protein 2
<a href="#">Details</a>	765	65	hsa-miR-96-5p	<a href="#">TBC1D22B</a>	TBC1 domain family member 22B
<a href="#">Details</a>	766	65	hsa-miR-96-5p	<a href="#">PES1</a>	pescadillo ribosomal biogenesis factor 1
<a href="#">Details</a>	767	65	hsa-miR-96-5p	<a href="#">FAM57A</a>	family with sequence similarity 57 member A
<a href="#">Details</a>	768	65	hsa-miR-96-5p	<a href="#">SLC39A10</a>	solute carrier family 39 member 10
<a href="#">Details</a>	769	65	hsa-miR-96-5p	<a href="#">RANBP6</a>	RAN binding protein 6
<a href="#">Details</a>	770	64	hsa-miR-96-5p	<a href="#">CACNA1C</a>	calcium voltage-gated channel subunit alpha1 C
<a href="#">Details</a>	771	64	hsa-miR-96-5p	<a href="#">DAB2</a>	DAB2, clathrin adaptor protein
<a href="#">Details</a>	772	64	hsa-miR-96-5p	<a href="#">CPSF7</a>	cleavage and polyadenylation specific factor 7
<a href="#">Details</a>	773	64	hsa-miR-96-5p	<a href="#">PCDH8</a>	protocadherin 8
<a href="#">Details</a>	774	64	hsa-miR-96-5p	<a href="#">TSPAN9</a>	tetraspanin 9
<a href="#">Details</a>	775	64	hsa-miR-96-5p	<a href="#">TMX1</a>	thioredoxin related transmembrane protein

					1
<a href="#">Details</a>	776	64	hsa-miR-96-5p	<a href="#">PFN1</a>	profilin 1
<a href="#">Details</a>	777	64	hsa-miR-96-5p	<a href="#">SLC44A1</a>	solute carrier family 44 member 1
<a href="#">Details</a>	778	64	hsa-miR-96-5p	<a href="#">RETREG1</a>	reticulophagy regulator 1
<a href="#">Details</a>	779	64	hsa-miR-96-5p	<a href="#">CCND2</a>	cyclin D2
<a href="#">Details</a>	780	64	hsa-miR-96-5p	<a href="#">JMJD6</a>	jumonji domain containing 6, arginine demethylase and lysine hydroxylase
<a href="#">Details</a>	781	64	hsa-miR-96-5p	<a href="#">KLRF1</a>	killer cell lectin like receptor F1
<a href="#">Details</a>	782	64	hsa-miR-96-5p	<a href="#">MPV17L</a>	MPV17 mitochondrial inner membrane protein like
<a href="#">Details</a>	783	64	hsa-miR-96-5p	<a href="#">IGSF3</a>	immunoglobulin superfamily member 3
<a href="#">Details</a>	784	64	hsa-miR-96-5p	<a href="#">NIPBL</a>	NIPBL, cohesin loading factor
<a href="#">Details</a>	785	64	hsa-miR-96-5p	<a href="#">COA4</a>	cytochrome c oxidase assembly factor 4 homolog
<a href="#">Details</a>	786	63	hsa-miR-96-5p	<a href="#">FEV</a>	FEV, ETS transcription factor
<a href="#">Details</a>	787	63	hsa-miR-96-5p	<a href="#">ARFGEF3</a>	ARFGEF family member 3
<a href="#">Details</a>	788	63	hsa-miR-96-5p	<a href="#">THAP2</a>	THAP domain containing 2
<a href="#">Details</a>	789	63	hsa-miR-96-5p	<a href="#">SPESP1</a>	sperm equatorial segment protein 1
<a href="#">Details</a>	790	63	hsa-miR-96-5p	<a href="#">NR3C1</a>	nuclear receptor subfamily 3 group C member 1
<a href="#">Details</a>	791	63	hsa-miR-96-5p	<a href="#">FNTA</a>	farnesyltransferase, CAAX box, alpha
<a href="#">Details</a>	792	63	hsa-miR-96-5p	<a href="#">KAT7</a>	lysine acetyltransferase 7
<a href="#">Details</a>	793	63	hsa-miR-96-5p	<a href="#">TRPC6</a>	transient receptor potential cation channel subfamily C member 6
<a href="#">Details</a>	794	63	hsa-miR-96-5p	<a href="#">JAKMIP2</a>	janus kinase and microtubule interacting protein 2
<a href="#">Details</a>	795	63	hsa-miR-96-5p	<a href="#">EFNA5</a>	ephrin A5
<a href="#">Details</a>	796	63	hsa-miR-96-5p	<a href="#">CCDC88A</a>	coiled-coil domain containing 88A
<a href="#">Details</a>	797	63	hsa-miR-96-5p	<a href="#">NSG2</a>	neuronal vesicle trafficking associated 2
<a href="#">Details</a>	798	63	hsa-miR-96-5p	<a href="#">FUT9</a>	fucosyltransferase 9
<a href="#">Details</a>	799	63	hsa-miR-96-5p	<a href="#">AVIL</a>	advillin
<a href="#">Details</a>	800	63	hsa-miR-96-5p	<a href="#">KDELR1</a>	KDEL endoplasmic reticulum protein retention receptor 1
<a href="#">Details</a>	801	63	hsa-miR-96-5p	<a href="#">NAPEPLD</a>	N-acyl phosphatidylethanolamine phospholipase D
<a href="#">Details</a>	802	62	hsa-miR-96-5p	<a href="#">SPTSSB</a>	serine palmitoyltransferase small subunit B
<a href="#">Details</a>	803	62	hsa-miR-96-5p	<a href="#">RNF208</a>	ring finger protein 208
<a href="#">Details</a>	804	62	hsa-miR-96-5p	<a href="#">CBLN4</a>	cerebellin 4 precursor
<a href="#">Details</a>	805	62	hsa-miR-96-5p	<a href="#">H6PD</a>	hexose-6-phosphate dehydrogenase/glucose 1-dehydrogenase
<a href="#">Details</a>	806	62	hsa-miR-96-5p	<a href="#">STX10</a>	syntaxin 10
<a href="#">Details</a>	807	62	hsa-miR-96-5p	<a href="#">FAM126B</a>	family with sequence similarity 126 member B
<a href="#">Details</a>	808	62	hsa-miR-96-5p	<a href="#">MAFF</a>	MAF bZIP transcription factor F
<a href="#">Details</a>	809	62	hsa-miR-96-5p	<a href="#">TMEM56-RWDD3</a>	TMEM56-RWDD3 readthrough
<a href="#">Details</a>	810	62	hsa-miR-96-5p	<a href="#">EEF1AKMT4-ECE2</a>	EEF1AKMT4-ECE2 readthrough
<a href="#">Details</a>	811	62	hsa-miR-96-5p	<a href="#">SOCS7</a>	suppressor of cytokine signaling 7
<a href="#">Details</a>	812	62	hsa-miR-96-5p	<a href="#">PRKACB</a>	protein kinase cAMP-activated catalytic subunit beta
<a href="#">Details</a>	813	62	hsa-miR-96-5p	<a href="#">SS18</a>	SS18, nBAF chromatin remodeling complex subunit
<a href="#">Details</a>	814	62	hsa-miR-96-5p	<a href="#">F13A1</a>	coagulation factor XIII A chain
<a href="#">Details</a>	815	62	hsa-miR-96-5p	<a href="#">BACH2</a>	BTB domain and CNC homolog 2
<a href="#">Details</a>	816	62	hsa-miR-96-5p	<a href="#">SCARB1</a>	scavenger receptor class B member 1
<a href="#">Details</a>	817	62	hsa-miR-96-5p	<a href="#">CRTIC3</a>	CREB regulated transcription coactivator 3

<a href="#">Details</a>	818	62	hsa-miR-96-5p	<a href="#">TTBK2</a>	tau tubulin kinase 2
<a href="#">Details</a>	819	62	hsa-miR-96-5p	<a href="#">OPN1MW</a>	opsin 1, medium wave sensitive
<a href="#">Details</a>	820	62	hsa-miR-96-5p	<a href="#">CTSB</a>	cathepsin B
<a href="#">Details</a>	821	62	hsa-miR-96-5p	<a href="#">MYO1D</a>	myosin ID
<a href="#">Details</a>	822	62	hsa-miR-96-5p	<a href="#">ECE2</a>	endothelin converting enzyme 2
<a href="#">Details</a>	823	62	hsa-miR-96-5p	<a href="#">SH3BGRL3</a>	SH3 domain binding glutamate rich protein like 3
<a href="#">Details</a>	824	62	hsa-miR-96-5p	<a href="#">NCAM1</a>	neural cell adhesion molecule 1
<a href="#">Details</a>	825	61	hsa-miR-96-5p	<a href="#">PAQR8</a>	progesterin and adiponectin receptor family member 8
<a href="#">Details</a>	826	61	hsa-miR-96-5p	<a href="#">DENND1A</a>	DENN domain containing 1A
<a href="#">Details</a>	827	61	hsa-miR-96-5p	<a href="#">SRSF6</a>	serine and arginine rich splicing factor 6
<a href="#">Details</a>	828	61	hsa-miR-96-5p	<a href="#">CACNA1G</a>	calcium voltage-gated channel subunit alpha1 G
<a href="#">Details</a>	829	61	hsa-miR-96-5p	<a href="#">LOC101927322</a>	uncharacterized LOC101927322
<a href="#">Details</a>	830	61	hsa-miR-96-5p	<a href="#">LYRM2</a>	LYR motif containing 2
<a href="#">Details</a>	831	61	hsa-miR-96-5p	<a href="#">TMEM178B</a>	transmembrane protein 178B
<a href="#">Details</a>	832	61	hsa-miR-96-5p	<a href="#">TOP3A</a>	DNA topoisomerase III alpha
<a href="#">Details</a>	833	61	hsa-miR-96-5p	<a href="#">MTR</a>	5-methyltetrahydrofolate-homocysteine methyltransferase
<a href="#">Details</a>	834	61	hsa-miR-96-5p	<a href="#">GTF3C4</a>	general transcription factor IIIC subunit 4
<a href="#">Details</a>	835	61	hsa-miR-96-5p	<a href="#">LEPR</a>	leptin receptor
<a href="#">Details</a>	836	61	hsa-miR-96-5p	<a href="#">ASPN</a>	asporin
<a href="#">Details</a>	837	61	hsa-miR-96-5p	<a href="#">SAP30L</a>	SAP30 like
<a href="#">Details</a>	838	61	hsa-miR-96-5p	<a href="#">B3GALT2</a>	beta-1,3-galactosyltransferase 2
<a href="#">Details</a>	839	61	hsa-miR-96-5p	<a href="#">SLC25A16</a>	solute carrier family 25 member 16
<a href="#">Details</a>	840	61	hsa-miR-96-5p	<a href="#">CMTR1</a>	cap methyltransferase 1
<a href="#">Details</a>	841	61	hsa-miR-96-5p	<a href="#">RNLS</a>	renalase, FAD dependent amine oxidase
<a href="#">Details</a>	842	61	hsa-miR-96-5p	<a href="#">SIM1</a>	SIM bHLH transcription factor 1
<a href="#">Details</a>	843	61	hsa-miR-96-5p	<a href="#">PPP1R13L</a>	protein phosphatase 1 regulatory subunit 13 like
<a href="#">Details</a>	844	61	hsa-miR-96-5p	<a href="#">PTPN4</a>	protein tyrosine phosphatase, non-receptor type 4
<a href="#">Details</a>	845	61	hsa-miR-96-5p	<a href="#">MYO5B</a>	myosin VB
<a href="#">Details</a>	846	61	hsa-miR-96-5p	<a href="#">GPLD1</a>	glycosylphosphatidylinositol specific phospholipase D1
<a href="#">Details</a>	847	60	hsa-miR-96-5p	<a href="#">STC2</a>	stanniocalcin 2
<a href="#">Details</a>	848	60	hsa-miR-96-5p	<a href="#">ACER2</a>	alkaline ceramidase 2
<a href="#">Details</a>	849	60	hsa-miR-96-5p	<a href="#">PET117</a>	PET117 homolog
<a href="#">Details</a>	850	60	hsa-miR-96-5p	<a href="#">CNOT6</a>	CCR4-NOT transcription complex subunit 6
<a href="#">Details</a>	851	60	hsa-miR-96-5p	<a href="#">TBC1D4</a>	TBC1 domain family member 4
<a href="#">Details</a>	852	60	hsa-miR-96-5p	<a href="#">PTPRE</a>	protein tyrosine phosphatase, receptor type E
<a href="#">Details</a>	853	60	hsa-miR-96-5p	<a href="#">VIPR1</a>	vasoactive intestinal peptide receptor 1
<a href="#">Details</a>	854	60	hsa-miR-96-5p	<a href="#">COL9A1</a>	collagen type IX alpha 1 chain
<a href="#">Details</a>	855	60	hsa-miR-96-5p	<a href="#">KLF13</a>	Kruppel like factor 13
<a href="#">Details</a>	856	60	hsa-miR-96-5p	<a href="#">EPM2AIP1</a>	EPM2A interacting protein 1
<a href="#">Details</a>	857	60	hsa-miR-96-5p	<a href="#">PDE6C</a>	phosphodiesterase 6C
<a href="#">Details</a>	858	60	hsa-miR-96-5p	<a href="#">RPRD1B</a>	regulation of nuclear pre-mRNA domain containing 1B
<a href="#">Details</a>	859	60	hsa-miR-96-5p	<a href="#">C18orf54</a>	chromosome 18 open reading frame 54
<a href="#">Details</a>	860	60	hsa-miR-96-5p	<a href="#">PHF21B</a>	PHD finger protein 21B
<a href="#">Details</a>	861	60	hsa-miR-96-5p	<a href="#">DISC1</a>	DISC1 scaffold protein
<a href="#">Details</a>	862	60	hsa-miR-96-5p	<a href="#">MTX3</a>	metaxin 3
<a href="#">Details</a>	863	60	hsa-miR-96-5p	<a href="#">MICAL3</a>	microtubule associated monooxygenase, calponin and LIM domain containing 3

<a href="#">Details</a>	864	60	hsa-miR-96-5p	<a href="#">UBE2QL1</a>	ubiquitin conjugating enzyme E2 Q family like 1
<a href="#">Details</a>	865	60	hsa-miR-96-5p	<a href="#">RAD51</a>	RAD51 recombinase
<a href="#">Details</a>	866	60	hsa-miR-96-5p	<a href="#">EEA1</a>	early endosome antigen 1
<a href="#">Details</a>	867	60	hsa-miR-96-5p	<a href="#">SLC2A14</a>	solute carrier family 2 member 14
<a href="#">Details</a>	868	59	hsa-miR-96-5p	<a href="#">FIGN</a>	fidgetin, microtubule severing factor
<a href="#">Details</a>	869	59	hsa-miR-96-5p	<a href="#">MGST2</a>	microsomal glutathione S-transferase 2
<a href="#">Details</a>	870	59	hsa-miR-96-5p	<a href="#">DNAJB8</a>	DnaJ heat shock protein family (Hsp40) member B8
<a href="#">Details</a>	871	59	hsa-miR-96-5p	<a href="#">TMEM164</a>	transmembrane protein 164
<a href="#">Details</a>	872	59	hsa-miR-96-5p	<a href="#">POU2F3</a>	POU class 2 homeobox 3
<a href="#">Details</a>	873	59	hsa-miR-96-5p	<a href="#">B3GALT1</a>	beta-1,3-galactosyltransferase 1
<a href="#">Details</a>	874	59	hsa-miR-96-5p	<a href="#">TWSG1</a>	twisted gastrulation BMP signaling modulator 1
<a href="#">Details</a>	875	59	hsa-miR-96-5p	<a href="#">COL4A6</a>	collagen type IV alpha 6 chain
<a href="#">Details</a>	876	59	hsa-miR-96-5p	<a href="#">TUFM</a>	Tu translation elongation factor, mitochondrial
<a href="#">Details</a>	877	59	hsa-miR-96-5p	<a href="#">LRP3</a>	LDL receptor related protein 3
<a href="#">Details</a>	878	59	hsa-miR-96-5p	<a href="#">ZNF697</a>	zinc finger protein 697
<a href="#">Details</a>	879	59	hsa-miR-96-5p	<a href="#">SIKE1</a>	suppressor of IKBKE 1
<a href="#">Details</a>	880	59	hsa-miR-96-5p	<a href="#">CALHM4</a>	calcium homeostasis modulator family member 4
<a href="#">Details</a>	881	59	hsa-miR-96-5p	<a href="#">DENR</a>	density regulated re-initiation and release factor
<a href="#">Details</a>	882	59	hsa-miR-96-5p	<a href="#">CCDC92</a>	coiled-coil domain containing 92
<a href="#">Details</a>	883	59	hsa-miR-96-5p	<a href="#">TMEM248</a>	transmembrane protein 248
<a href="#">Details</a>	884	59	hsa-miR-96-5p	<a href="#">THSD7A</a>	thrombospondin type 1 domain containing 7A
<a href="#">Details</a>	885	59	hsa-miR-96-5p	<a href="#">CYYR1</a>	cysteine and tyrosine rich 1
<a href="#">Details</a>	886	58	hsa-miR-96-5p	<a href="#">PCDHA3</a>	protocadherin alpha 3
<a href="#">Details</a>	887	58	hsa-miR-96-5p	<a href="#">FOXN3</a>	forkhead box N3
<a href="#">Details</a>	888	58	hsa-miR-96-5p	<a href="#">PCDHA8</a>	protocadherin alpha 8
<a href="#">Details</a>	889	58	hsa-miR-96-5p	<a href="#">PCDHAC1</a>	protocadherin alpha subfamily C, 1
<a href="#">Details</a>	890	58	hsa-miR-96-5p	<a href="#">SLC35C1</a>	solute carrier family 35 member C1
<a href="#">Details</a>	891	58	hsa-miR-96-5p	<a href="#">FAM124A</a>	family with sequence similarity 124 member A
<a href="#">Details</a>	892	58	hsa-miR-96-5p	<a href="#">TMPRSS12</a>	transmembrane serine protease 12
<a href="#">Details</a>	893	58	hsa-miR-96-5p	<a href="#">ZNF24</a>	zinc finger protein 24
<a href="#">Details</a>	894	58	hsa-miR-96-5p	<a href="#">ANTXR2</a>	ANTXR cell adhesion molecule 2
<a href="#">Details</a>	895	58	hsa-miR-96-5p	<a href="#">TNS1</a>	tensin 1
<a href="#">Details</a>	896	58	hsa-miR-96-5p	<a href="#">PCDHAC2</a>	protocadherin alpha subfamily C, 2
<a href="#">Details</a>	897	58	hsa-miR-96-5p	<a href="#">PCDHA13</a>	protocadherin alpha 13
<a href="#">Details</a>	898	58	hsa-miR-96-5p	<a href="#">PCDHA4</a>	protocadherin alpha 4
<a href="#">Details</a>	899	58	hsa-miR-96-5p	<a href="#">BCL2</a>	BCL2, apoptosis regulator
<a href="#">Details</a>	900	58	hsa-miR-96-5p	<a href="#">CD59</a>	CD59 molecule (CD59 blood group)
<a href="#">Details</a>	901	58	hsa-miR-96-5p	<a href="#">PCDHA1</a>	protocadherin alpha 1
<a href="#">Details</a>	902	58	hsa-miR-96-5p	<a href="#">SYPL2</a>	synaptophysin like 2
<a href="#">Details</a>	903	58	hsa-miR-96-5p	<a href="#">FOXP1</a>	forkhead box P1
<a href="#">Details</a>	904	58	hsa-miR-96-5p	<a href="#">RIMS4</a>	regulating synaptic membrane exocytosis 4
<a href="#">Details</a>	905	58	hsa-miR-96-5p	<a href="#">MAMLD1</a>	mastermind like domain containing 1
<a href="#">Details</a>	906	58	hsa-miR-96-5p	<a href="#">AREL1</a>	apoptosis resistant E3 ubiquitin protein ligase 1
<a href="#">Details</a>	907	58	hsa-miR-96-5p	<a href="#">PCDHA10</a>	protocadherin alpha 10
<a href="#">Details</a>	908	58	hsa-miR-96-5p	<a href="#">PCDHA5</a>	protocadherin alpha 5
<a href="#">Details</a>	909	58	hsa-miR-96-5p	<a href="#">PCDHA7</a>	protocadherin alpha 7
<a href="#">Details</a>	910	58	hsa-miR-96-5p	<a href="#">TP73</a>	tumor protein p73

<a href="#">Details</a>	911	58	hsa-miR-96-5p	<a href="#">RAVER2</a>	ribonucleoprotein, PTB binding 2
<a href="#">Details</a>	912	58	hsa-miR-96-5p	<a href="#">ZNF585B</a>	zinc finger protein 585B
<a href="#">Details</a>	913	58	hsa-miR-96-5p	<a href="#">PCDHA2</a>	protocadherin alpha 2
<a href="#">Details</a>	914	58	hsa-miR-96-5p	<a href="#">ZNF91</a>	zinc finger protein 91
<a href="#">Details</a>	915	58	hsa-miR-96-5p	<a href="#">MACO1</a>	macoilin 1
<a href="#">Details</a>	916	58	hsa-miR-96-5p	<a href="#">TTC39A</a>	tetratricopeptide repeat domain 39A
<a href="#">Details</a>	917	58	hsa-miR-96-5p	<a href="#">PCDHA12</a>	protocadherin alpha 12
<a href="#">Details</a>	918	58	hsa-miR-96-5p	<a href="#">PCDHA6</a>	protocadherin alpha 6
<a href="#">Details</a>	919	58	hsa-miR-96-5p	<a href="#">ARID4A</a>	AT-rich interaction domain 4A
<a href="#">Details</a>	920	58	hsa-miR-96-5p	<a href="#">TIMP4</a>	TIMP metallopeptidase inhibitor 4
<a href="#">Details</a>	921	58	hsa-miR-96-5p	<a href="#">OXR1</a>	oxidation resistance 1
<a href="#">Details</a>	922	58	hsa-miR-96-5p	<a href="#">SLC6A6</a>	solute carrier family 6 member 6
<a href="#">Details</a>	923	58	hsa-miR-96-5p	<a href="#">PCDHA11</a>	protocadherin alpha 11
<a href="#">Details</a>	924	57	hsa-miR-96-5p	<a href="#">VPS26B</a>	VPS26, retromer complex component B
<a href="#">Details</a>	925	57	hsa-miR-96-5p	<a href="#">PDE1A</a>	phosphodiesterase 1A
<a href="#">Details</a>	926	57	hsa-miR-96-5p	<a href="#">SSH1</a>	slingshot protein phosphatase 1
<a href="#">Details</a>	927	57	hsa-miR-96-5p	<a href="#">ELL2</a>	elongation factor for RNA polymerase II 2
<a href="#">Details</a>	928	57	hsa-miR-96-5p	<a href="#">SNX7</a>	sorting nexin 7
<a href="#">Details</a>	929	57	hsa-miR-96-5p	<a href="#">GNG12</a>	G protein subunit gamma 12
<a href="#">Details</a>	930	57	hsa-miR-96-5p	<a href="#">RGS5</a>	regulator of G protein signaling 5
<a href="#">Details</a>	931	57	hsa-miR-96-5p	<a href="#">STRBP</a>	spermatid perinuclear RNA binding protein
<a href="#">Details</a>	932	57	hsa-miR-96-5p	<a href="#">CABLES1</a>	Cdk5 and Abl enzyme substrate 1
<a href="#">Details</a>	933	57	hsa-miR-96-5p	<a href="#">DOK4</a>	docking protein 4
<a href="#">Details</a>	934	57	hsa-miR-96-5p	<a href="#">EDNRA</a>	endothelin receptor type A
<a href="#">Details</a>	935	57	hsa-miR-96-5p	<a href="#">BHLHE22</a>	basic helix-loop-helix family member e22
<a href="#">Details</a>	936	57	hsa-miR-96-5p	<a href="#">ZNF480</a>	zinc finger protein 480
<a href="#">Details</a>	937	57	hsa-miR-96-5p	<a href="#">DERL3</a>	derlin 3
<a href="#">Details</a>	938	57	hsa-miR-96-5p	<a href="#">AHCYL1</a>	adenosylhomocysteinase like 1
<a href="#">Details</a>	939	57	hsa-miR-96-5p	<a href="#">MOSPD2</a>	motile sperm domain containing 2
<a href="#">Details</a>	940	57	hsa-miR-96-5p	<a href="#">RBPM5</a>	RNA binding protein, mRNA processing factor
<a href="#">Details</a>	941	57	hsa-miR-96-5p	<a href="#">ATF7IP</a>	activating transcription factor 7 interacting protein
<a href="#">Details</a>	942	57	hsa-miR-96-5p	<a href="#">ALDOA</a>	aldolase, fructose-bisphosphate A
<a href="#">Details</a>	943	57	hsa-miR-96-5p	<a href="#">ELMO2</a>	engulfment and cell motility 2
<a href="#">Details</a>	944	57	hsa-miR-96-5p	<a href="#">PIK3AP1</a>	phosphoinositide-3-kinase adaptor protein 1
<a href="#">Details</a>	945	57	hsa-miR-96-5p	<a href="#">CDYL2</a>	chromodomain Y like 2
<a href="#">Details</a>	946	56	hsa-miR-96-5p	<a href="#">RNF217</a>	ring finger protein 217
<a href="#">Details</a>	947	56	hsa-miR-96-5p	<a href="#">TMOD1</a>	tropomodulin 1
<a href="#">Details</a>	948	56	hsa-miR-96-5p	<a href="#">ZNF175</a>	zinc finger protein 175
<a href="#">Details</a>	949	56	hsa-miR-96-5p	<a href="#">RABIF</a>	RAB interacting factor
<a href="#">Details</a>	950	56	hsa-miR-96-5p	<a href="#">SYNM</a>	synemin
<a href="#">Details</a>	951	56	hsa-miR-96-5p	<a href="#">ZNF268</a>	zinc finger protein 268
<a href="#">Details</a>	952	56	hsa-miR-96-5p	<a href="#">DCUN1D4</a>	defective in cullin neddylation 1 domain containing 4
<a href="#">Details</a>	953	56	hsa-miR-96-5p	<a href="#">CRAMP1</a>	cramped chromatin regulator homolog 1
<a href="#">Details</a>	954	56	hsa-miR-96-5p	<a href="#">CCND1</a>	cyclin D1
<a href="#">Details</a>	955	56	hsa-miR-96-5p	<a href="#">TMSB10</a>	thymosin beta 10
<a href="#">Details</a>	956	56	hsa-miR-96-5p	<a href="#">SFRP4</a>	secreted frizzled related protein 4
<a href="#">Details</a>	957	56	hsa-miR-96-5p	<a href="#">ASB5</a>	ankyrin repeat and SOCS box containing 5
<a href="#">Details</a>	958	56	hsa-miR-96-5p	<a href="#">TNFSF8</a>	TNF superfamily member 8
<a href="#">Details</a>	959	56	hsa-miR-96-5p	<a href="#">CHMP1B</a>	charged multivesicular body protein 1B
<a href="#">Details</a>	960	56	hsa-miR-96-5p	<a href="#">FHL5</a>	four and a half LIM domains 5
<a href="#">Details</a>	961	56	hsa-miR-96-5p	<a href="#">GRID2</a>	glutamate ionotropic receptor delta type subunit 2

<a href="#">Details</a>	962	56	hsa-miR-96-5p	<a href="#">TRPC5</a>	transient receptor potential cation channel subfamily C member 5
<a href="#">Details</a>	963	56	hsa-miR-96-5p	<a href="#">CCDC141</a>	coiled-coil domain containing 141
<a href="#">Details</a>	964	56	hsa-miR-96-5p	<a href="#">C2orf73</a>	chromosome 2 open reading frame 73
<a href="#">Details</a>	965	56	hsa-miR-96-5p	<a href="#">PAIP2</a>	poly(A) binding protein interacting protein 2
<a href="#">Details</a>	966	56	hsa-miR-96-5p	<a href="#">PACS2</a>	phosphofuran acid cluster sorting protein 2
<a href="#">Details</a>	967	56	hsa-miR-96-5p	<a href="#">DYRK2</a>	dual specificity tyrosine phosphorylation regulated kinase 2
<a href="#">Details</a>	968	55	hsa-miR-96-5p	<a href="#">C5orf30</a>	chromosome 5 open reading frame 30
<a href="#">Details</a>	969	55	hsa-miR-96-5p	<a href="#">TMEM260</a>	transmembrane protein 260
<a href="#">Details</a>	970	55	hsa-miR-96-5p	<a href="#">TAF12</a>	TATA-box binding protein associated factor 12
<a href="#">Details</a>	971	55	hsa-miR-96-5p	<a href="#">LSM14A</a>	LSM14A, mRNA processing body assembly factor
<a href="#">Details</a>	972	55	hsa-miR-96-5p	<a href="#">FAF2</a>	Fas associated factor family member 2
<a href="#">Details</a>	973	55	hsa-miR-96-5p	<a href="#">MLLT1</a>	MLLT1, super elongation complex subunit
<a href="#">Details</a>	974	55	hsa-miR-96-5p	<a href="#">ALG2</a>	ALG2, alpha-1,3/1,6-mannosyltransferase
<a href="#">Details</a>	975	55	hsa-miR-96-5p	<a href="#">ZNF765</a>	zinc finger protein 765
<a href="#">Details</a>	976	55	hsa-miR-96-5p	<a href="#">DNMT3A</a>	DNA methyltransferase 3 alpha
<a href="#">Details</a>	977	55	hsa-miR-96-5p	<a href="#">CSNK1D</a>	casein kinase 1 delta
<a href="#">Details</a>	978	55	hsa-miR-96-5p	<a href="#">CCNY</a>	cyclin Y
<a href="#">Details</a>	979	55	hsa-miR-96-5p	<a href="#">KHSRP</a>	KH-type splicing regulatory protein
<a href="#">Details</a>	980	55	hsa-miR-96-5p	<a href="#">KCNJ2</a>	potassium voltage-gated channel subfamily J member 2
<a href="#">Details</a>	981	55	hsa-miR-96-5p	<a href="#">HTRA4</a>	HtrA serine peptidase 4
<a href="#">Details</a>	982	55	hsa-miR-96-5p	<a href="#">ATG7</a>	autophagy related 7
<a href="#">Details</a>	983	55	hsa-miR-96-5p	<a href="#">LDB2</a>	LIM domain binding 2
<a href="#">Details</a>	984	55	hsa-miR-96-5p	<a href="#">MAST3</a>	microtubule associated serine/threonine kinase 3
<a href="#">Details</a>	985	55	hsa-miR-96-5p	<a href="#">NT5DC3</a>	5'-nucleotidase domain containing 3
<a href="#">Details</a>	986	55	hsa-miR-96-5p	<a href="#">C12orf60</a>	chromosome 12 open reading frame 60
<a href="#">Details</a>	987	55	hsa-miR-96-5p	<a href="#">UBE2K</a>	ubiquitin conjugating enzyme E2 K
<a href="#">Details</a>	988	55	hsa-miR-96-5p	<a href="#">SCN2A</a>	sodium voltage-gated channel alpha subunit 2
<a href="#">Details</a>	989	55	hsa-miR-96-5p	<a href="#">TRIM71</a>	tripartite motif containing 71
<a href="#">Details</a>	990	55	hsa-miR-96-5p	<a href="#">GOLPH3L</a>	golgi phosphoprotein 3 like
<a href="#">Details</a>	991	55	hsa-miR-96-5p	<a href="#">KLHL2</a>	kelch like family member 2
<a href="#">Details</a>	992	54	hsa-miR-96-5p	<a href="#">C22orf24</a>	chromosome 22 open reading frame 24
<a href="#">Details</a>	993	54	hsa-miR-96-5p	<a href="#">SOX10</a>	SRY-box 10
<a href="#">Details</a>	994	54	hsa-miR-96-5p	<a href="#">PCDHA9</a>	protocadherin alpha 9
<a href="#">Details</a>	995	54	hsa-miR-96-5p	<a href="#">CDC42BPA</a>	CDC42 binding protein kinase alpha
<a href="#">Details</a>	996	54	hsa-miR-96-5p	<a href="#">MECP2</a>	methyl-CpG binding protein 2
<a href="#">Details</a>	997	54	hsa-miR-96-5p	<a href="#">BCL11A</a>	BCL11A, BAF complex component
<a href="#">Details</a>	998	54	hsa-miR-96-5p	<a href="#">PRKAA2</a>	protein kinase AMP-activated catalytic subunit alpha 2
<a href="#">Details</a>	999	54	hsa-miR-96-5p	<a href="#">DEXI</a>	Dexi homolog
<a href="#">Details</a>	1000	54	hsa-miR-96-5p	<a href="#">ARL4C</a>	ADP ribosylation factor like GTPase 4C
<a href="#">Details</a>	1001	54	hsa-miR-96-5p	<a href="#">NUP50</a>	nucleoporin 50
<a href="#">Details</a>	1002	54	hsa-miR-96-5p	<a href="#">SCN1A</a>	sodium voltage-gated channel alpha subunit 1
<a href="#">Details</a>	1003	54	hsa-miR-96-5p	<a href="#">SLC7A14</a>	solute carrier family 7 member 14
<a href="#">Details</a>	1004	54	hsa-miR-96-5p	<a href="#">INPP5D</a>	inositol polyphosphate-5-phosphatase D
<a href="#">Details</a>	1005	54	hsa-miR-96-5p	<a href="#">CHMP1A</a>	charged multivesicular body protein 1A
<a href="#">Details</a>	1006	54	hsa-miR-96-5p	<a href="#">CLDN20</a>	claudin 20
<a href="#">Details</a>	1007	54	hsa-miR-96-5p	<a href="#">STN1</a>	STN1, CST complex subunit

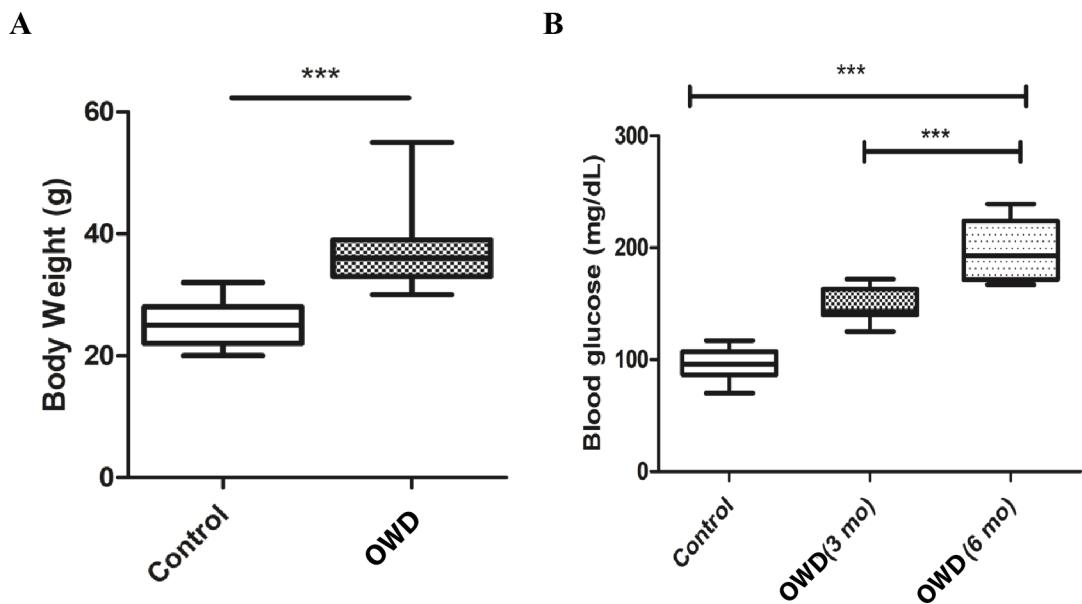
<a href="#">Details</a>	1008	54	hsa-miR-96-5p	<a href="#">GGA2</a>	golgi associated, gamma adaptin ear containing, ARF binding protein 2
<a href="#">Details</a>	1009	54	hsa-miR-96-5p	<a href="#">KMT2A</a>	lysine methyltransferase 2A
<a href="#">Details</a>	1010	54	hsa-miR-96-5p	<a href="#">ODF2</a>	outer dense fiber of sperm tails 2
<a href="#">Details</a>	1011	54	hsa-miR-96-5p	<a href="#">CNOT9</a>	CCR4-NOT transcription complex subunit 9
<a href="#">Details</a>	1012	53	hsa-miR-96-5p	<a href="#">GRM5</a>	glutamate metabotropic receptor 5
<a href="#">Details</a>	1013	53	hsa-miR-96-5p	<a href="#">CBX6</a>	chromobox 6
<a href="#">Details</a>	1014	53	hsa-miR-96-5p	<a href="#">MRPL48</a>	mitochondrial ribosomal protein L48
<a href="#">Details</a>	1015	53	hsa-miR-96-5p	<a href="#">CYB5B</a>	cytochrome b5 type B
<a href="#">Details</a>	1016	53	hsa-miR-96-5p	<a href="#">ZDHHC5</a>	zinc finger DHHC-type containing 5
<a href="#">Details</a>	1017	53	hsa-miR-96-5p	<a href="#">EPB41L2</a>	erythrocyte membrane protein band 4.1 like 2
<a href="#">Details</a>	1018	53	hsa-miR-96-5p	<a href="#">FREM1</a>	FRAS1 related extracellular matrix 1
<a href="#">Details</a>	1019	53	hsa-miR-96-5p	<a href="#">SYBU</a>	syntabulin
<a href="#">Details</a>	1020	53	hsa-miR-96-5p	<a href="#">LMNA</a>	lamin A/C
<a href="#">Details</a>	1021	53	hsa-miR-96-5p	<a href="#">DAB2IP</a>	DAB2 interacting protein
<a href="#">Details</a>	1022	53	hsa-miR-96-5p	<a href="#">LDLRAD4</a>	low density lipoprotein receptor class A domain containing 4
<a href="#">Details</a>	1023	53	hsa-miR-96-5p	<a href="#">HES1</a>	hes family bHLH transcription factor 1
<a href="#">Details</a>	1024	53	hsa-miR-96-5p	<a href="#">TTC14</a>	tetratricopeptide repeat domain 14
<a href="#">Details</a>	1025	53	hsa-miR-96-5p	<a href="#">TSPAN4</a>	tetraspanin 4
<a href="#">Details</a>	1026	53	hsa-miR-96-5p	<a href="#">TOP2A</a>	DNA topoisomerase II alpha
<a href="#">Details</a>	1027	53	hsa-miR-96-5p	<a href="#">MARCH3</a>	membrane associated ring-CH-type finger 3
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<a href="#">Details</a>	1029	53	hsa-miR-96-5p	<a href="#">A1CF</a>	APOBEC1 complementation factor
<a href="#">Details</a>	1030	53	hsa-miR-96-5p	<a href="#">HSP90AA1</a>	heat shock protein 90 alpha family class A member 1
<a href="#">Details</a>	1031	52	hsa-miR-96-5p	<a href="#">SNX4</a>	sorting nexin 4
<a href="#">Details</a>	1032	52	hsa-miR-96-5p	<a href="#">SOS1</a>	SOS Ras/Rac guanine nucleotide exchange factor 1
<a href="#">Details</a>	1033	52	hsa-miR-96-5p	<a href="#">C10orf105</a>	chromosome 10 open reading frame 105
<a href="#">Details</a>	1034	52	hsa-miR-96-5p	<a href="#">MAL2</a>	mal, T cell differentiation protein 2 (gene/pseudogene)
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<a href="#">Details</a>	1037	52	hsa-miR-96-5p	<a href="#">MVB12B</a>	multivesicular body subunit 12B
<a href="#">Details</a>	1038	52	hsa-miR-96-5p	<a href="#">ASB6</a>	ankyrin repeat and SOCS box containing 6
<a href="#">Details</a>	1039	52	hsa-miR-96-5p	<a href="#">EBF1</a>	EBF transcription factor 1
<a href="#">Details</a>	1040	52	hsa-miR-96-5p	<a href="#">SH3BGRL2</a>	SH3 domain binding glutamate rich protein like 2
<a href="#">Details</a>	1041	52	hsa-miR-96-5p	<a href="#">PTPDC1</a>	protein tyrosine phosphatase domain containing 1
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<a href="#">Details</a>	1044	52	hsa-miR-96-5p	<a href="#">PLXDC2</a>	plexin domain containing 2
<a href="#">Details</a>	1045	52	hsa-miR-96-5p	<a href="#">CNNM2</a>	cyclin and CBS domain divalent metal cation transport mediator 2
<a href="#">Details</a>	1046	52	hsa-miR-96-5p	<a href="#">SLC25A25</a>	solute carrier family 25 member 25
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<a href="#">Details</a>	1054	51	hsa-miR-96-5p	<a href="#">RIT1</a>	Ras like without CAAX 1
<a href="#">Details</a>	1055	51	hsa-miR-96-5p	<a href="#">CSRNP3</a>	cysteine and serine rich nuclear protein 3
<a href="#">Details</a>	1056	51	hsa-miR-96-5p	<a href="#">CCDC50</a>	coiled-coil domain containing 50
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<a href="#">Details</a>	1058	51	hsa-miR-96-5p	<a href="#">RBM4</a>	RNA binding motif protein 4
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<a href="#">Details</a>	1063	51	hsa-miR-96-5p	<a href="#">NDRG1</a>	N-myc downstream regulated 1
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<a href="#">Details</a>	1065	51	hsa-miR-96-5p	<a href="#">RFWD3</a>	ring finger and WD repeat domain 3
<a href="#">Details</a>	1066	51	hsa-miR-96-5p	<a href="#">CELF1</a>	CUGBP Elav-like family member 1
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<a href="#">Details</a>	1073	50	hsa-miR-96-5p	<a href="#">ZNF532</a>	zinc finger protein 532
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<a href="#">Details</a>	1080	50	hsa-miR-96-5p	<a href="#">SBDS</a>	SBDS, ribosome maturation factor
<a href="#">Details</a>	1081	50	hsa-miR-96-5p	<a href="#">ARHGEF7</a>	Rho guanine nucleotide exchange factor 7
<a href="#">Details</a>	1082	50	hsa-miR-96-5p	<a href="#">CYLD</a>	CYLD lysine 63 deubiquitinase
<a href="#">Details</a>	1083	50	hsa-miR-96-5p	<a href="#">SIRT1</a>	sirtuin 1
<a href="#">Details</a>	1084	50	hsa-miR-96-5p	<a href="#">MLEC</a>	malectin
<a href="#">Details</a>	1085	50	hsa-miR-96-5p	<a href="#">ZZZ3</a>	zinc finger ZZ-type containing 3
<a href="#">Details</a>	1086	50	hsa-miR-96-5p	<a href="#">CCND3</a>	cyclin D3
<a href="#">Details</a>	1087	50	hsa-miR-96-5p	<a href="#">VPS35L</a>	VPS35 endosomal protein sorting factor like
<a href="#">Details</a>	1088	50	hsa-miR-96-5p	<a href="#">ZNF706</a>	zinc finger protein 706
<a href="#">Details</a>	1089	50	hsa-miR-96-5p	<a href="#">AGO1</a>	argonaute RISC catalytic component 1
<a href="#">Details</a>	1090	50	hsa-miR-96-5p	<a href="#">ADAM18</a>	ADAM metallopeptidase domain 18
<a href="#">Details</a>	1091	50	hsa-miR-96-5p	<a href="#">CTDSPL</a>	CTD small phosphatase like
<a href="#">Details</a>	1092	50	hsa-miR-96-5p	<a href="#">FAM8A1</a>	family with sequence similarity 8 member A1
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<a href="#">Details</a>	1095	50	hsa-miR-96-5p	<a href="#">GRIN2B</a>	glutamate ionotropic receptor NMDA type subunit 2B
<a href="#">Details</a>	1096	50	hsa-miR-96-5p	<a href="#">STOX2</a>	storkhead box 2
<a href="#">Details</a>	1097	50	hsa-miR-96-5p	<a href="#">GPRASP2</a>	G protein-coupled receptor associated sorting protein 2
<a href="#">Details</a>	1098	50	hsa-miR-96-5p	<a href="#">CTDP1</a>	CTD phosphatase subunit 1
<a href="#">Details</a>	1099	50	hsa-miR-96-5p	<a href="#">IQCE</a>	IQ motif containing E
<a href="#">Details</a>	1100	50	hsa-miR-96-5p	<a href="#">AP4E1</a>	adaptor related protein complex 4 subunit

					epsilon 1
<a href="#">Details</a>	1101	50	hsa-miR-96-5p	<a href="#">CMTM7</a>	CKLF like MARVEL transmembrane domain containing 7

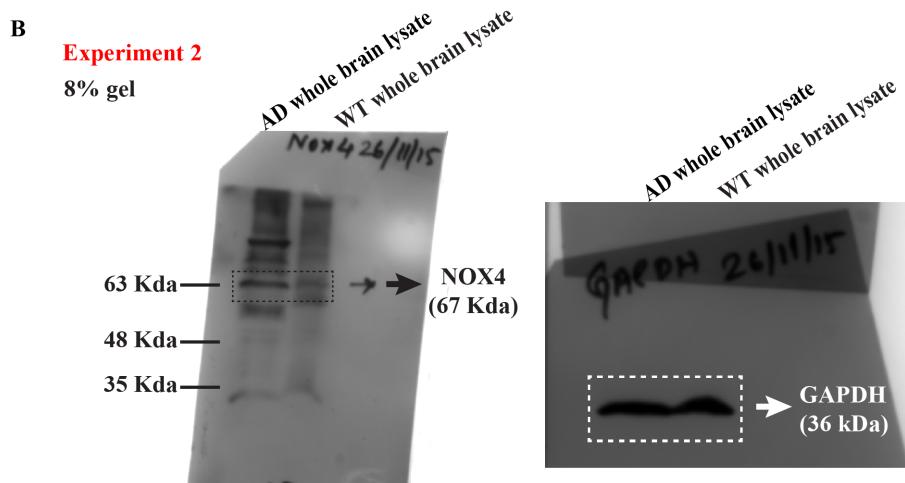
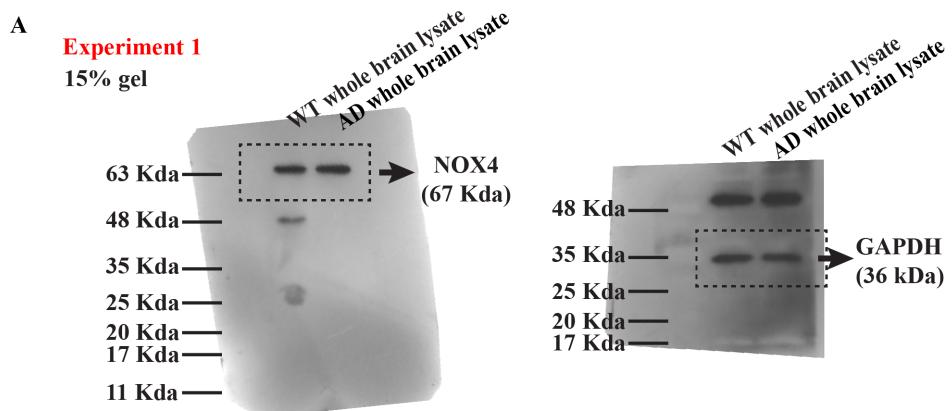
**Supplementary Figures:**

**Figure S1**



**Figure S1: Generation of T2D mice model:** **A** shows the significant increase of body weight of obesogenic western diet (OWD) fed mice compared to the age matched normal chow fed control mice. **B** shows the significant increase of blood glucose level in OWD fed mice for 3 and 6 months compared to the age matched normal chow fed control mice.

**Figure S2**



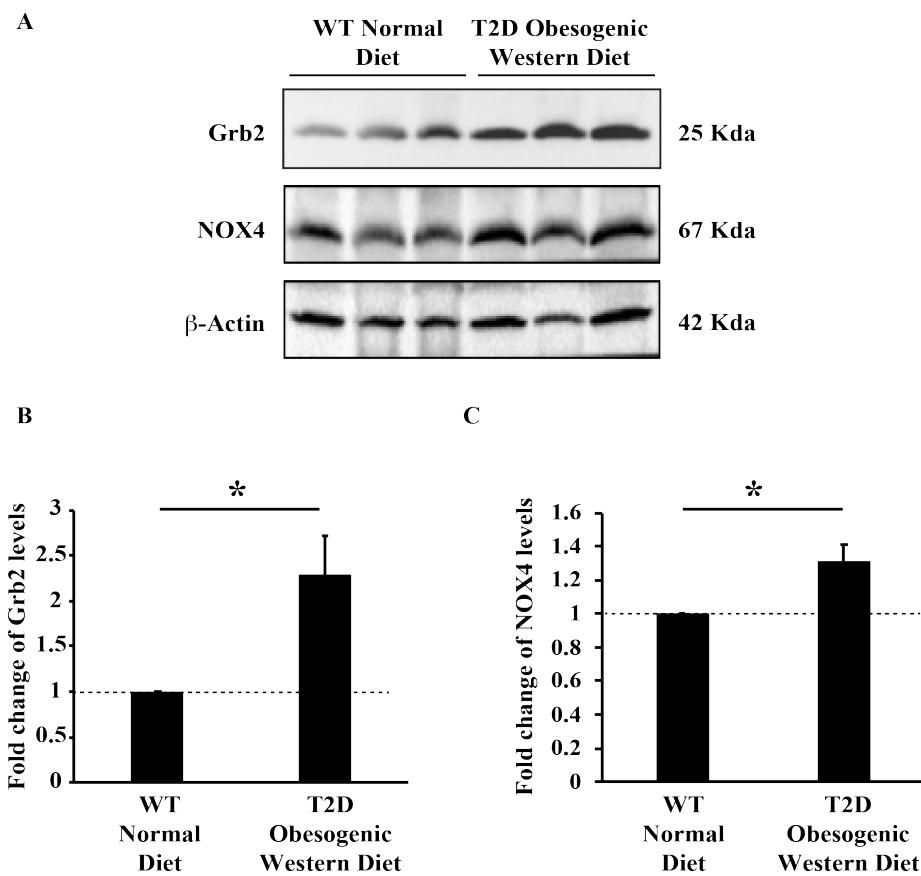
**C**

**Statistical Calculation**

Normalized by loading control (GAPDH)				Normalized by loading control (GAPDH)				
Expt 1	NOX4	GAPDH	NOX4/GAPDH	Expt 2	NOX4	GAPDH	NOX4/GAPDH	
WT1	45.84	66.17	0.69276107	WT1	32.87	48.53	0.677313002	
AD1	50.18	41.75	1.201916168	AD1	69.7	51.47	1.354186905	
Normalized by test control (WT)				Normalized by test control (WT)				
Expt 1	WT1/WT1	1		Expt 2	WT1	WT1/WT1	1	
WT1	WT1/WT1	1		WT1	WT1/WT1	1		
AD1	AD1/WT	1.73496494		AD1	AD1/WT	1.9993517		
Statistical Calculation with n=2								
	Repeat 1	Repeat 2			Average intensity	STDEV	SEM	p value
WT	1	1			1	0	0	
AD	1.73496494	1.9993517			1.867158321	0.18694967	0.13219338	0.022459334

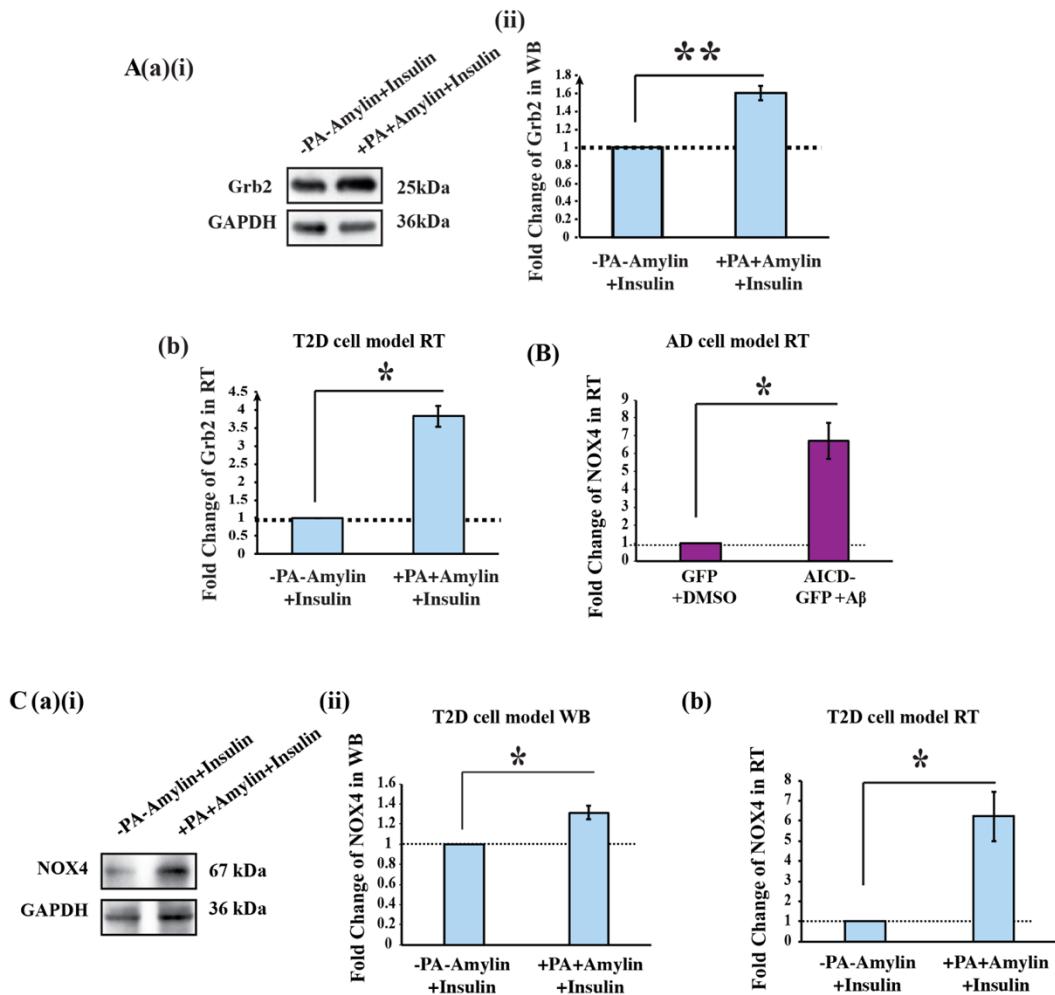
**Figure S2: Expression levels of NOX4 in AD brain.** **A** and **B** showed the Western blot data from experiment 1 and 2 respectively. **C** displayed the statistical analysis of NOX4 in AD brain *post-mortem* samples.

**Figure S3**



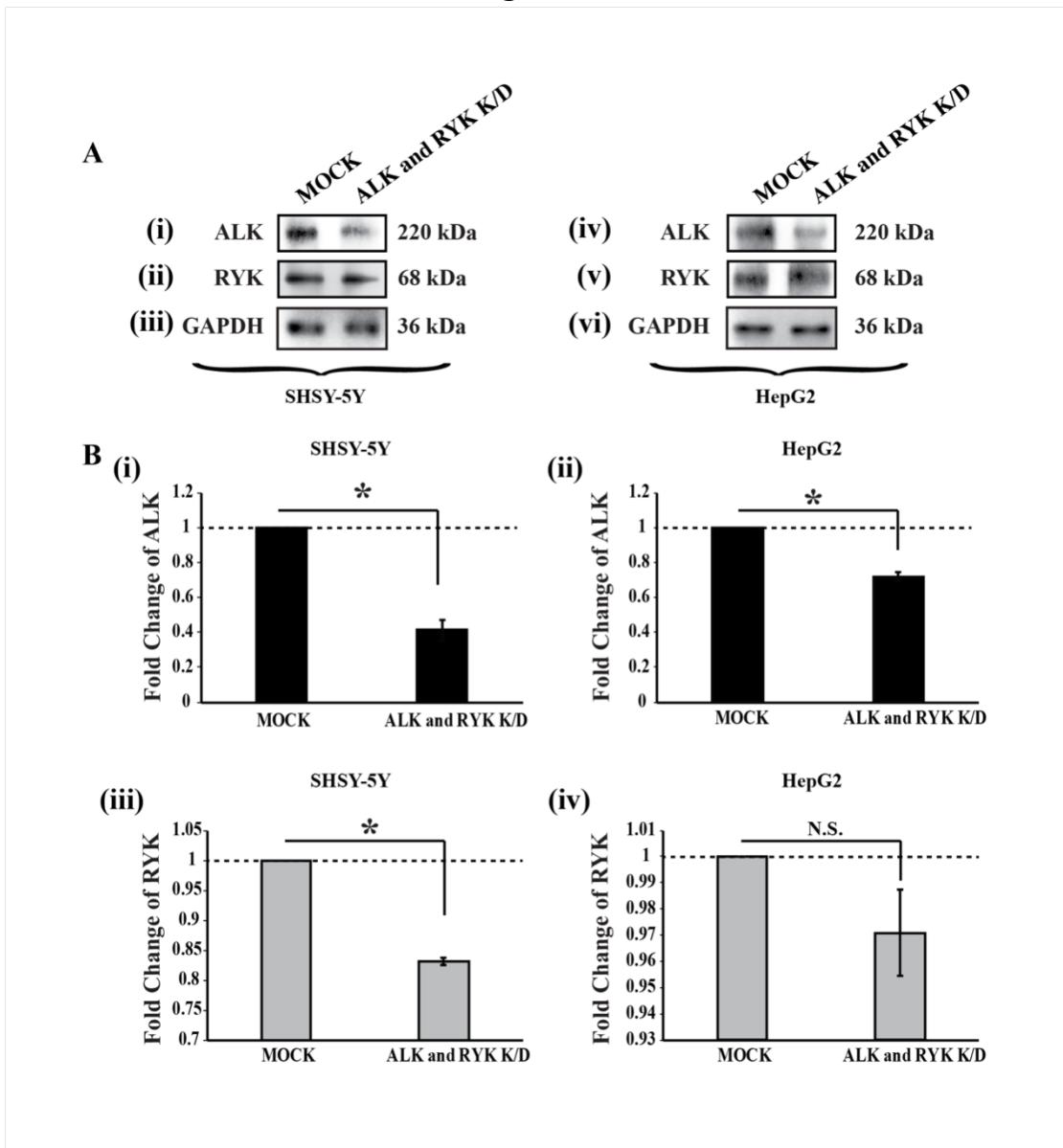
**Figure S3: Grb2 and NOX4 are upregulated in T2D mice model.** A Western blot showing Grb2, NOX4 and  $\beta$ -Actin in T2D mouse model where C57BL/6 mice are maintained in obesogenic western diet and in normal chow diet. **(B) and (C)** Histograms representing the mean values of Grb2 and NOX4 normalized against  $\beta$ -Actin. Grb2 and NOX4 were overexpressed in T2D liver by 2.3 fold and 1.3 fold, respectively.

**Figure S4**



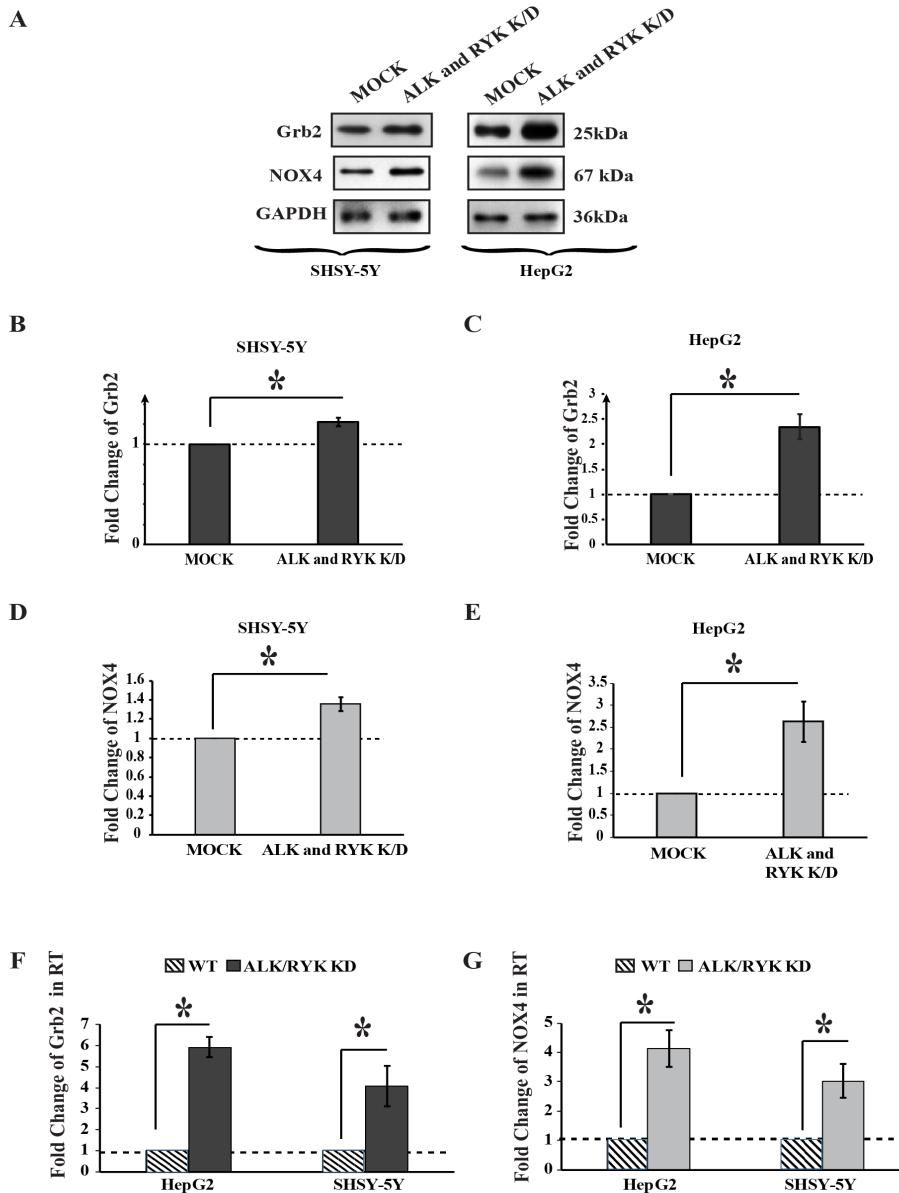
**Figure S4: Grb2 and NOX4 are upregulated in AD and T2D cell models.** **A (a) (i)** Western blot showing alterations of Grb2 and GAPDH levels in Palmitate and Amylin treated conditions in HepG2. **(ii)** Graphical representation of the normalized variations of Grb2 expressions compared to control cells. **(b)** Normalized fold changes of mRNA levels of Grb2 for qRT-PCR experiments with GAPDH taken as internal control. **B** shows the normalized fold changes of mRNA levels of NOX4 in AICD transfected/A $\beta$  treated conditions in SHSY-5Y with GAPDH taken as internal control. **C (a) (i)** Western blot showing alterations of NOX4 and GAPDH levels in Palmitate and Amylin treated conditions (T2D cell model) in HepG2. **(ii)** Graphical representation of the normalized variations of NOX4 expressions compared to control cells. **(b)** Normalized fold changes of mRNA levels of NOX4 with GAPDH taken as internal control in T2D cell model.

**Figure S5**



**Figure S5: Expression levels alterations of ALK and RYK in ALK/RYK double knockdown model.** **A** Western Blot showing the ALK (**i** and **iv**), NOX4 (**ii** and **v**) and GAPDH (**iii** and **vi**) levels in both SHSY-5Y and HepG2 cell lines. **(i)** and **(iii)**, Graphical representations of the normalized variations of ALK and RYK in expressions compared to MOCK (two non-targeted siRNAs treated) in SHSY-5Y cell line. **(ii)** and **(iv)** Graphical representation of the normalized variations of ALK and RYK in expressions compared to MOCK in HepG2 cell line. **B** Graphical representation of the normalized variation of ALK expression levels in **(i)** SHSY-5Y and **(ii)** HepG2 cell lines compared to GAPDH. Similarly, the normalized variation of RYK expression levels were graphically represented in **(iii)** SHSY-5Y and **(iv)** HepG2 cell lines compared to GAPDH

**Figure S6**



**Figure S6: Alteration of expression of Grb2 and NOX4 in ALK and RYK double knockdown models.** (A) Western blot showing levels of Grb2, NOX4 and GAPDH in ALK and RYK double knock-down SHSY-5Y and HepG2 cells. (B), (C), (D) and (E) graphically represent the normalized overexpressed levels of Grb2 and NOX4 compared to respective controls in SHSY-5Y and HepG2 cell lines. Grb2 is significantly upregulated by 1.22 fold in SHSY-5Y and 2.34 fold in HepG2 and NOX4 is increased by 1.35 fold in SHSY-5Y and by 2.62 fold in HepG2. (F) and (G) show transcript level changes in ALK and RYK double knockdown (K/D) conditions. Transcript levels of Grb2 is significantly upregulated by 4.08 fold in SHSY-5Y and 5.9 fold in HepG2, NOX4 transcript levels are increased by 3.02 fold in SHSY-5Y and by 4.13 fold in HepG2.

**Figure S7**

**Genomics for MIR1271 Gene**

**GeneHancer (GH) Regulatory Elements** [\(see citations\)](#)

Download GeneHancer 2017 data

[Request up-to-date GeneHancer data](#) Download GeneHancer data sheet

Promoters and enhancers for MIR1271 Gene

Filter:  (12 results) See all 12 »

GeneHancer (GH) Identifier	GH Type	GH Score	GH Sources	Gene Association Score	Total Score	TSS distance (kb)	Number of Genes Away	Size (kb)	Transcription Factor Binding Sites	Gene Targets
<a href="#">GH05J176410</a>	Promoter/Enhancer	1.9*	EPDnew, Ensembl, ENCODE, CraniofacialAtlas, dbSUPER	10.9	20.63	+47.0	11	8.8	186 TFs HCFC1 ZNF580 ...	20 genes CLTB ...

Gene targets for GeneHancer: CLTB ENSG00000251414 FAF2 HIGD2A ARL11 NOP16 UIMC1 ENSG00000250900 [MIR1271](#) AA1191 CDHR2 RN7SL684P NSD1 RPL21P60 MXD3 SIMC1 FAM153B RF00017-4730 Inc-NOP16-1 RF00017-4726

Genomic Location: chr5:176410515-176419317 (GRCh38/hg38) chr5:175837516-175846318 (GRCh37/hg19)

Phenotypes: **GWAS Catalog:**  
body height

Promoter entries in source DBs: **EPDnew:**  

- › [CLTB\\_2](#) (chr5:176416395-176416454)
- › [CLTB\\_1](#) (chr5:176416529-176416588)

**Ensembl:**  

- › [ENSR00000191215](#) (chr5:176414600-176417401)  
*Tissues and cells:* CD4+ ab T cells (PB),CD4+ ab T cells,CD4+CD25+ ab regulatory T cells (PB),CD8+ ab T cells (PB),Natural killer cells (PB),Thymus,Thymus (fetal),T cells (PB)
- › [ENSR000001263220](#) (chr5:176413000-176414001)  
*Tissues and cells:* CD4+ ab T cells,CD4+CD25+ ab regulatory T cells (PB),Thymus,Thymus (fetal),T cells (PB)
- › [ENSR000001263221](#) (chr5:176414200-176414401)  
*Tissues and cells:* CD4+ ab T cells,CD4+CD25+ ab regulatory T cells (PB),CD8+ ab T cells (PB),Natural killer cells (PB),Thymus,Thymus (fetal),T cells (PB)

Note: PB - peripheral blood; VB - venous blood; CB - cord blood; BM - bone marrow

**CraniofacialAtlas:**  
Embryonic development:  

- › chr5:176416200-176416599 ( CS13 (4 pcw) , CS14 (4.5 pcw) , CS15 (5 pcw) , CS17 (6 pcw) , CS20 (8 pcw) , 10 pcw )

Enhancer entries in source DBs: **ENCODE:**  

- › chr5:176410515-176419317, **Types:** Proximal, Distal

**Biosamples:**  

- Immortalized Cell Lines:* HepG2, K562, Panc1, GM12878, HeLa-S3, MCF-7, HCT116
- In Vitro Differentiated Cells:* myotube, mesendoderm, mesenchymal stem cell
- Induced Pluripotent Stem Cell Lines:* iPS DF 19.11
- Primary Cells:* natural killer cell, IMR-90, T-cell, foreskin melanocyte, CD14-positive monocyte, B cell, keratinocyte, mammary epithelial cell, foreskin fibroblast, trophoblast cell, common myeloid progenitor, CD34-positive, endothelial cell of umbilical vein, fibroblast of lung
- Stem Cells:* H1-hESC, neural stem progenitor cell
- Tissues:* thymus, adrenal gland, muscle of leg, female gonad, stomach, small intestine, psoas muscle, pancreas, muscle of trunk, placenta, large intestine

**dbSuper:**  
Belongs to 4 super-enhancers:  
[SE\\_23466](#) (Colon crypt) [SE\\_49118](#) (Right atrium) [SE\\_57855](#) (V503) [SE\\_51034](#) (Sigmoid colon)

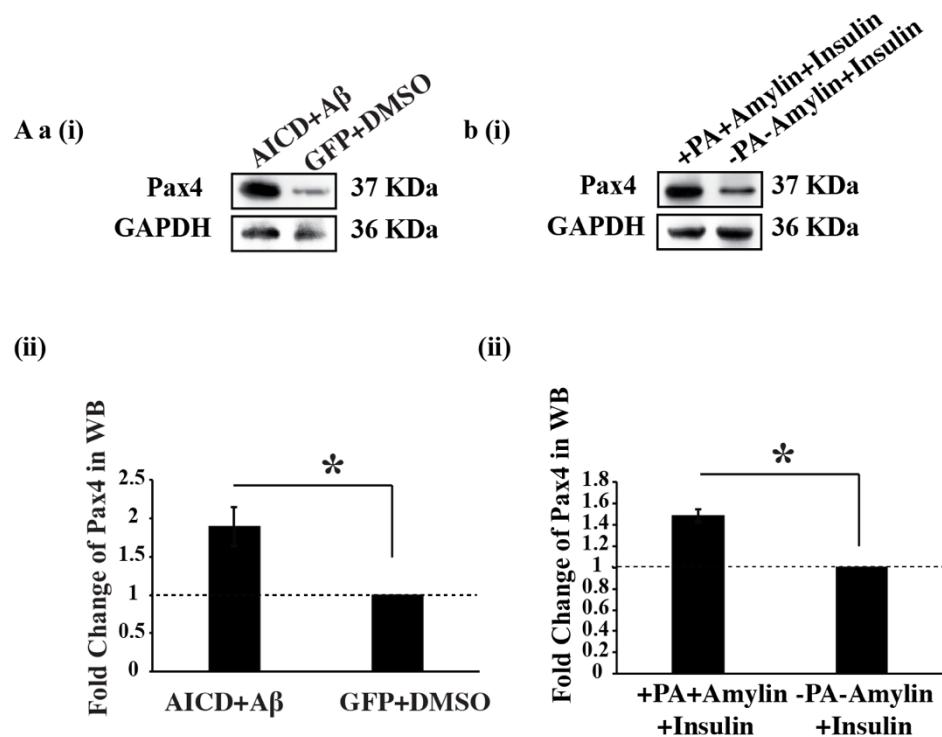
GeneHancer-gene association evidence:  
**GTEX eQTL p-value:** -  
**C-HiC score:** 1.1 × 10<sup>1</sup>  
**eRNA co-expression p-value:** -  
**Distance score:** 0.26

GeneHancer and Gene share a Topological Associated Domain (TAD), with evidence in 14/19 biosamples

Transcription Factor Binding Sites:  
 HCFC1 ZNF580 KLF1 SP1 LF17 JUND ZNF184 CTCF ZNF600 RCOR1 POLR2A ZIC2 BRCA1 REST ZNF207 ZNF592 MAZ NONO ELK1 ZMYM3 SSR1 TBP TCF12 ZNF639 ZNF217 ZNF341 MAX NR2C1 CHD4 SMAD5 KMT2B KLF11 LTF1 CTBP1 SAP130 RAD21 ZNF511 RUNX1 DEAF1 SIN3A MIER3 THAP11 SMC3 SIN3B SMARCA5 SAFB SMAD4 DDX20 SKIL FOSL2 RARA TEAD3 DMAP1 BCL6 ATF1 CBX1 SP1 BCL1B MYC BHLHE40 ZNF24 ZNF189 SOX5 ZNF2 ZEB2 NRP1 SMARCE1 ZBTB33 IKZF1 R81 FOXM1 ZNF664 EGR1 RFX5 GATA1 NR2F1 HDAC1 DPF2 HMG20B TAF1 JUN ZNF792 ZHX1 HNRNPL ZSCAN29 STAT1 TOE1 NYFC BACH1 GLIS1 TFAP4 ZNF143 ZFP698 BCLAF1 TEAD4 ZFP36 RXRB MEIS2 NCOA3 ZKSCAN1 CREM ZFX ELF3 SP7 ARID3A ZNF701 L3MBTL2 SREBF1 KLF5 KDM3A NKRF TRIM28 KLF1 ZNF561 ARID4B NFIL3 ZNF687 KLF10 CREB1 PPARG MBD1 ATF3 KDM1A MNT PKNOX1 YY1 MIXL1 ZNF660 ZBTB8A SP5 DACH1 LEF1 EGR2 GATA2A FOS XRC55 MTA1 EP300 ZNF692 PATZ1 SREBF2 RFX1 KAT8 LARP7 ESRRRA IRF2 IRF3 ATF2 TRIM22 ATF7 ZBTB17 GLIS2 ZNF579 SOX13 SOX6 GTF2F1 TDP1 MTA3 U2AF1 CBX3 GATA2D2 ZSCAN18 RNF2 ARNT RUNX3 FOXA3 NXFL1 ZBTB20 ZNF121 BCOR GTF2A2 RBFOX2 CHD1 ZFHX2 TFE3 SKI ZGPAT ZNF423 TARDBP ZBTB26 HDAC2 ZNF335 ZNF444 ERF ZBTB44 UBTF

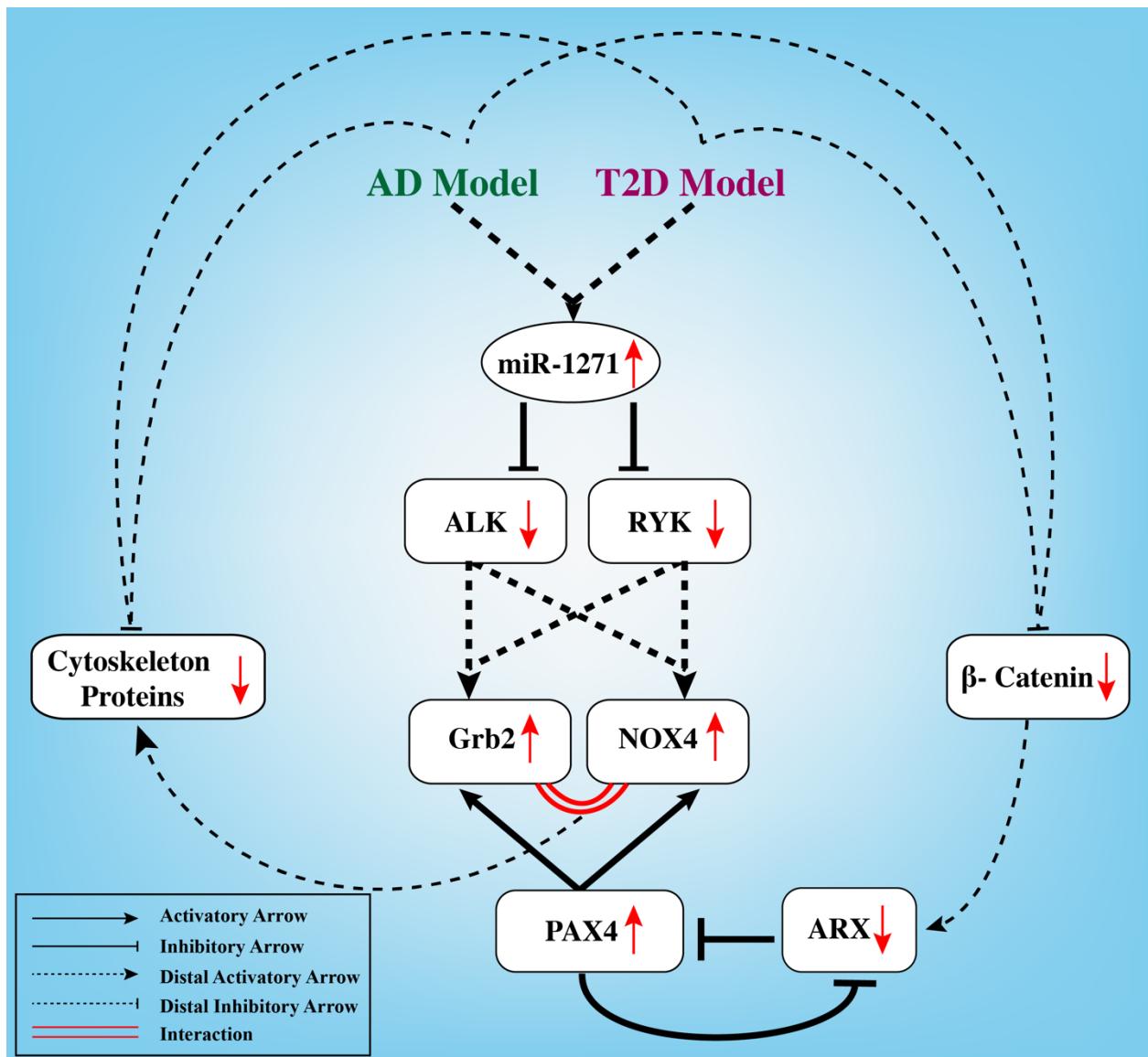
**Figure S7: Details of genehancer GH05J176410.** MIR1271 is one of the target gene for GH05J176410 and SP1 has a binding site in GH05J176410.

**Figure S8**



**Figure S8: Endogenous PAX4 levels are upregulated in AD and T2D cell models.** A shows PAX4 protein level alterations by Western Blot in (a)(i) AD cell model (b)(i) T2D cell model. A (a) (ii) and (b) (ii) graphically represent the Pax4 protein level elevation of 1.8 and 2 folds in AD and T2D models, respectively.

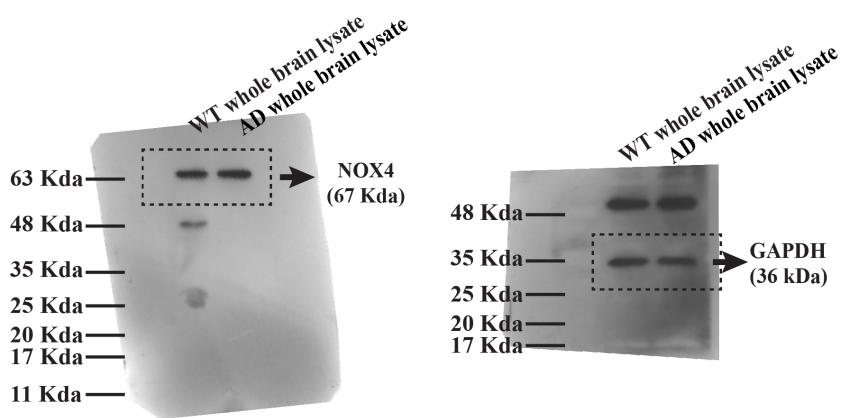
**Figure S9**



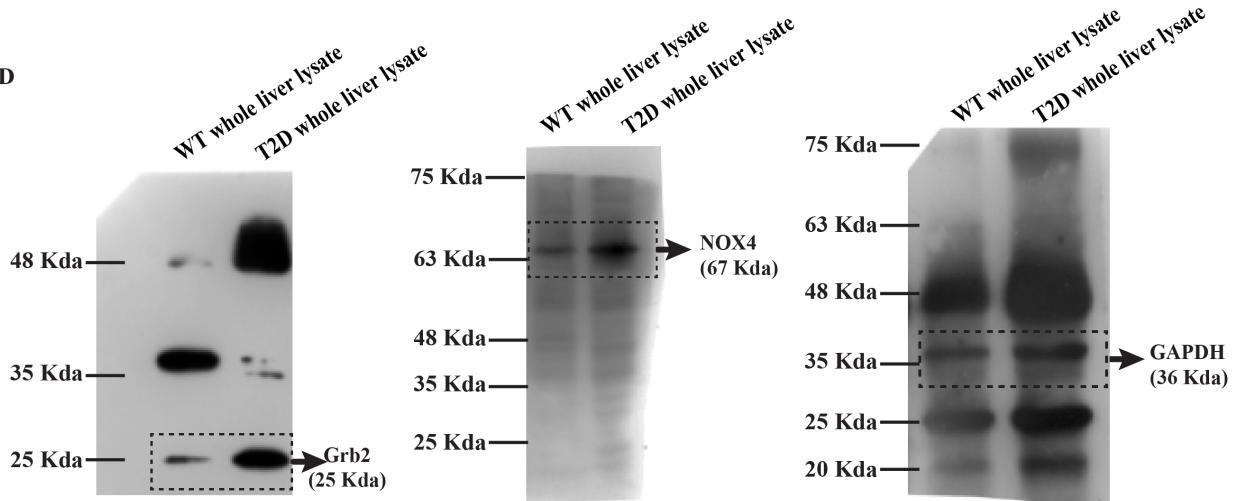
**Figure S9: Graphical Abstract:** Showing the deregulation of involved proteins/miRNA/events in both AD and T2D conditions.

**Figure 1**

A



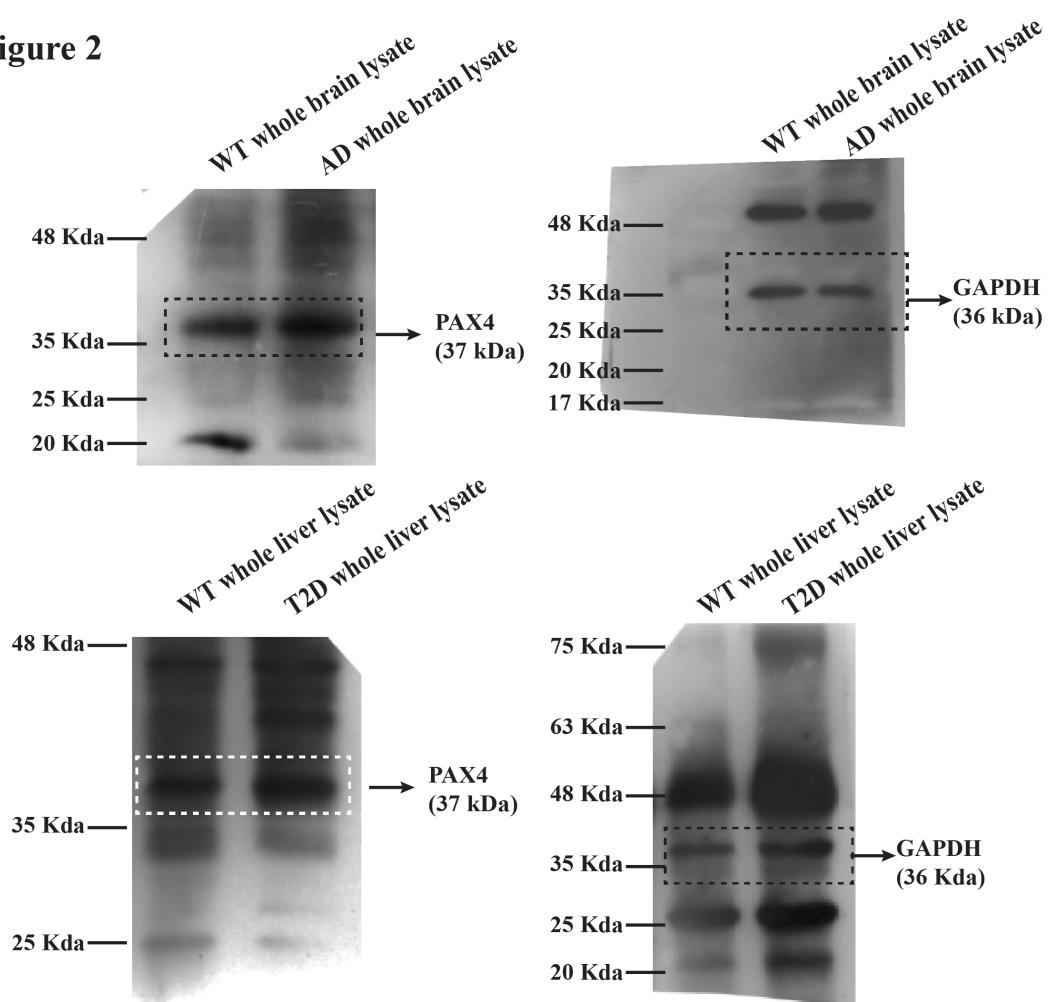
D



**Full blots correspond to Figure 1(A) and (D)**

**Figure 2**

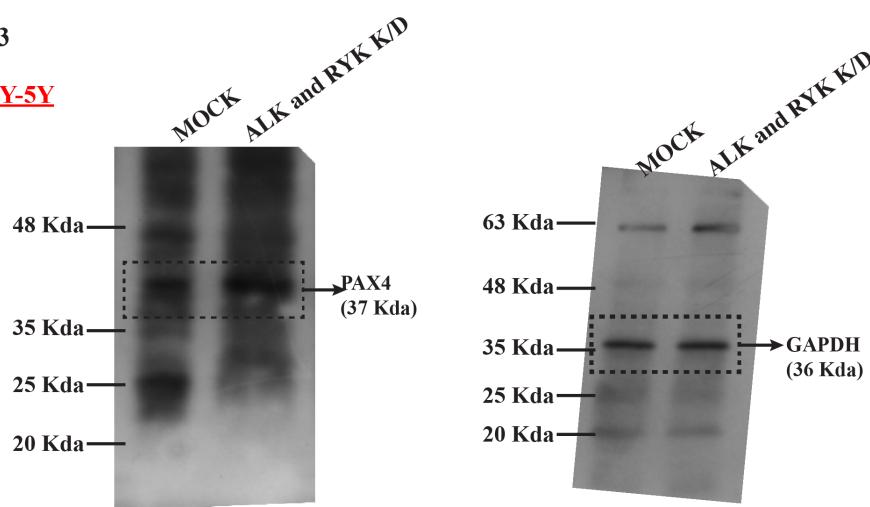
C



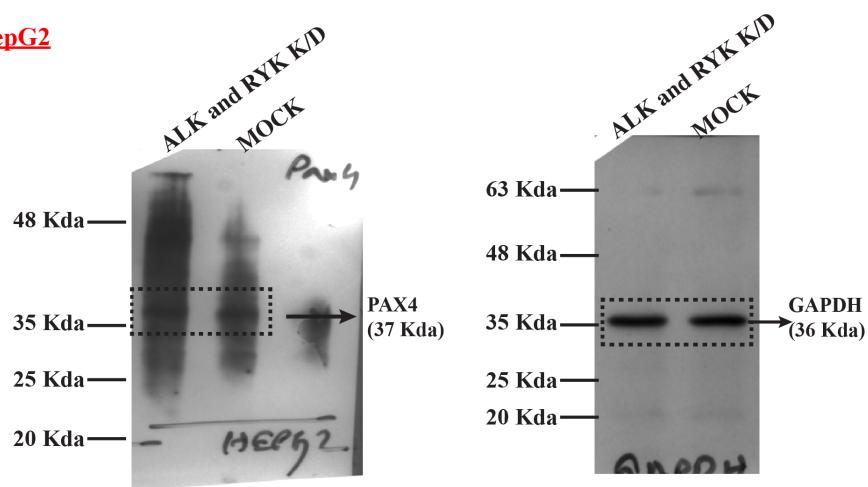
**Full blots correspond to Figure 2 (C)**

**Figure 3**

**C SHSY-5Y**

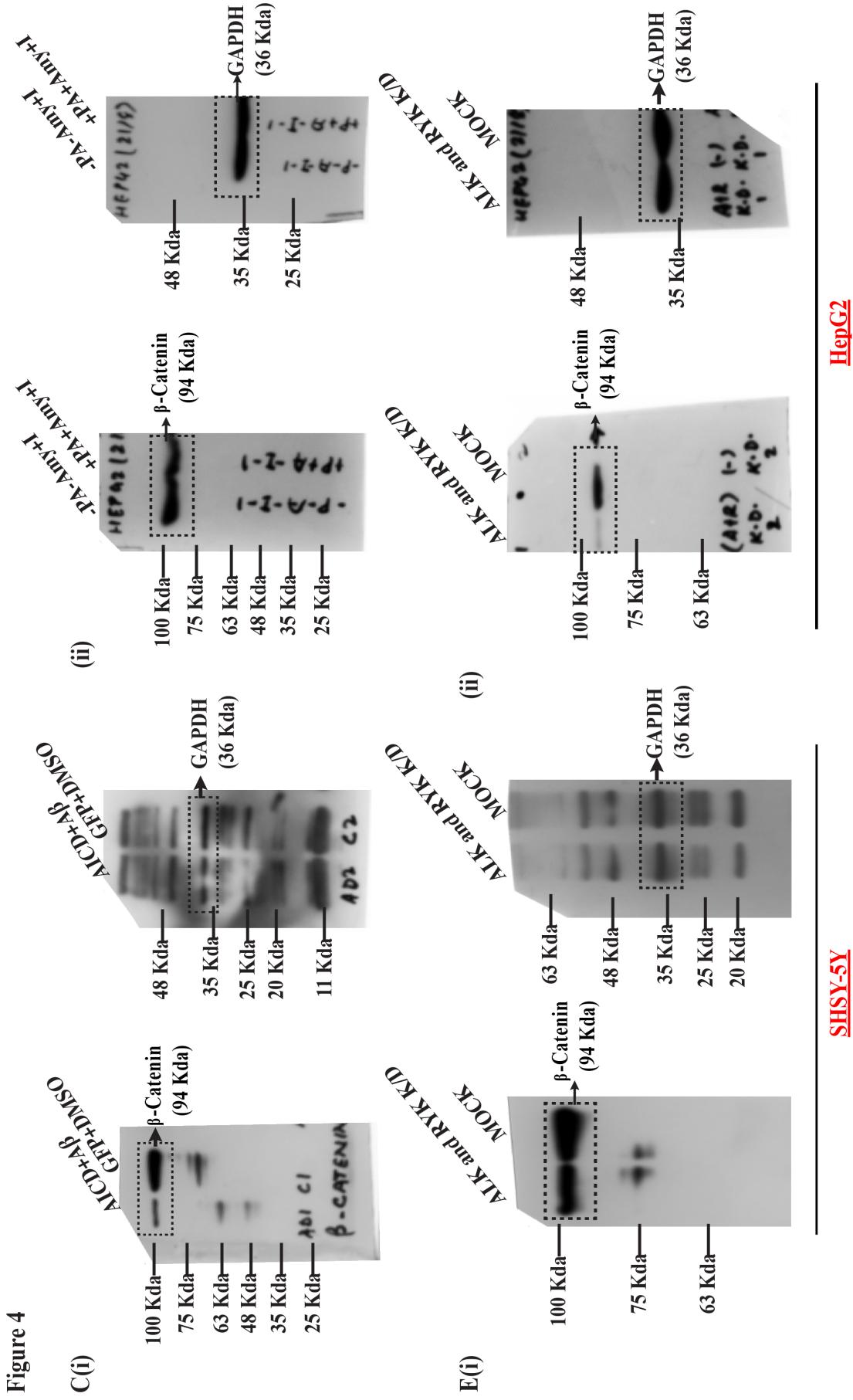


**HepG2**



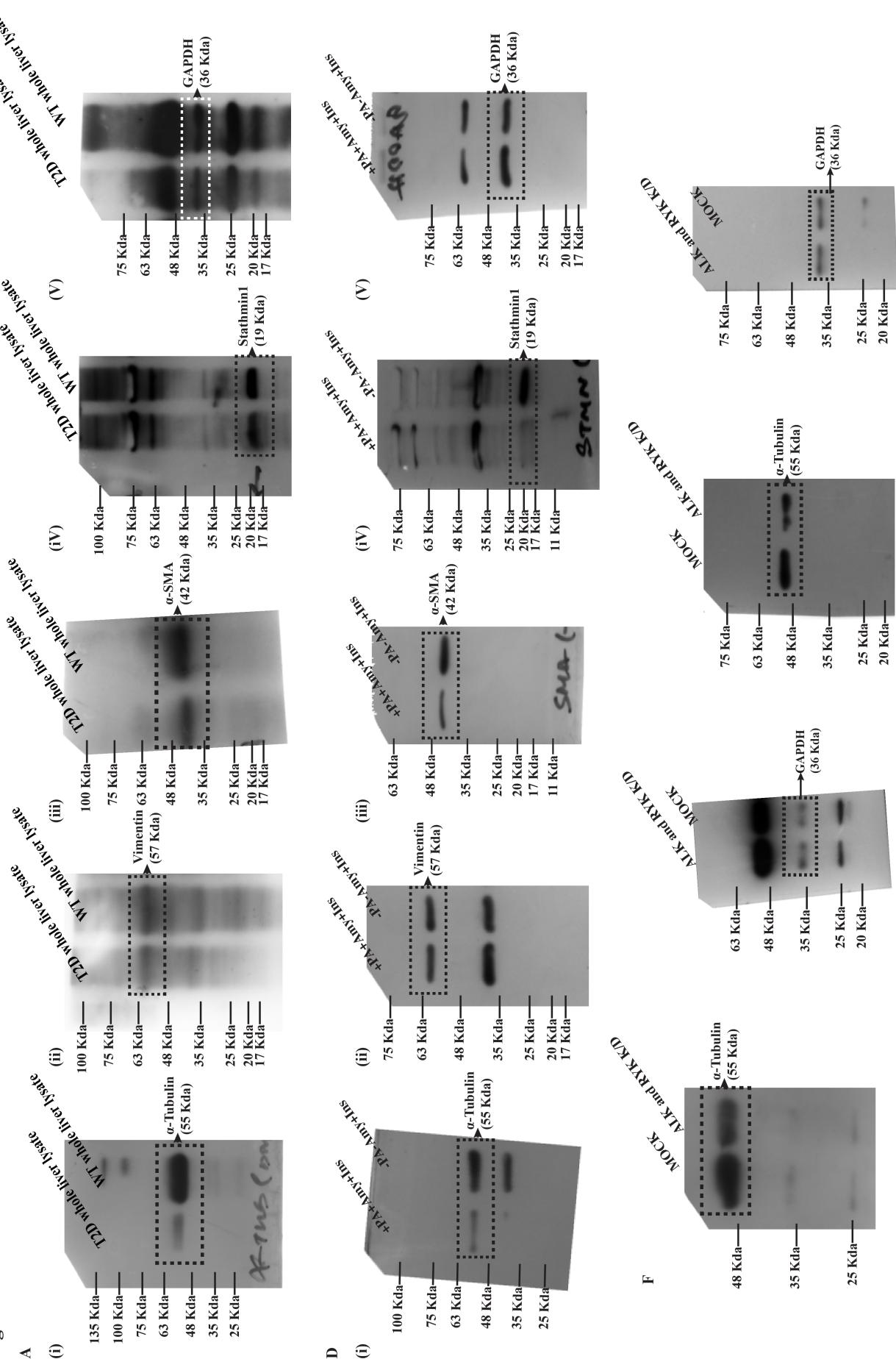
**Full blots correspond to Figure 3 (C)**

**Figure 4**



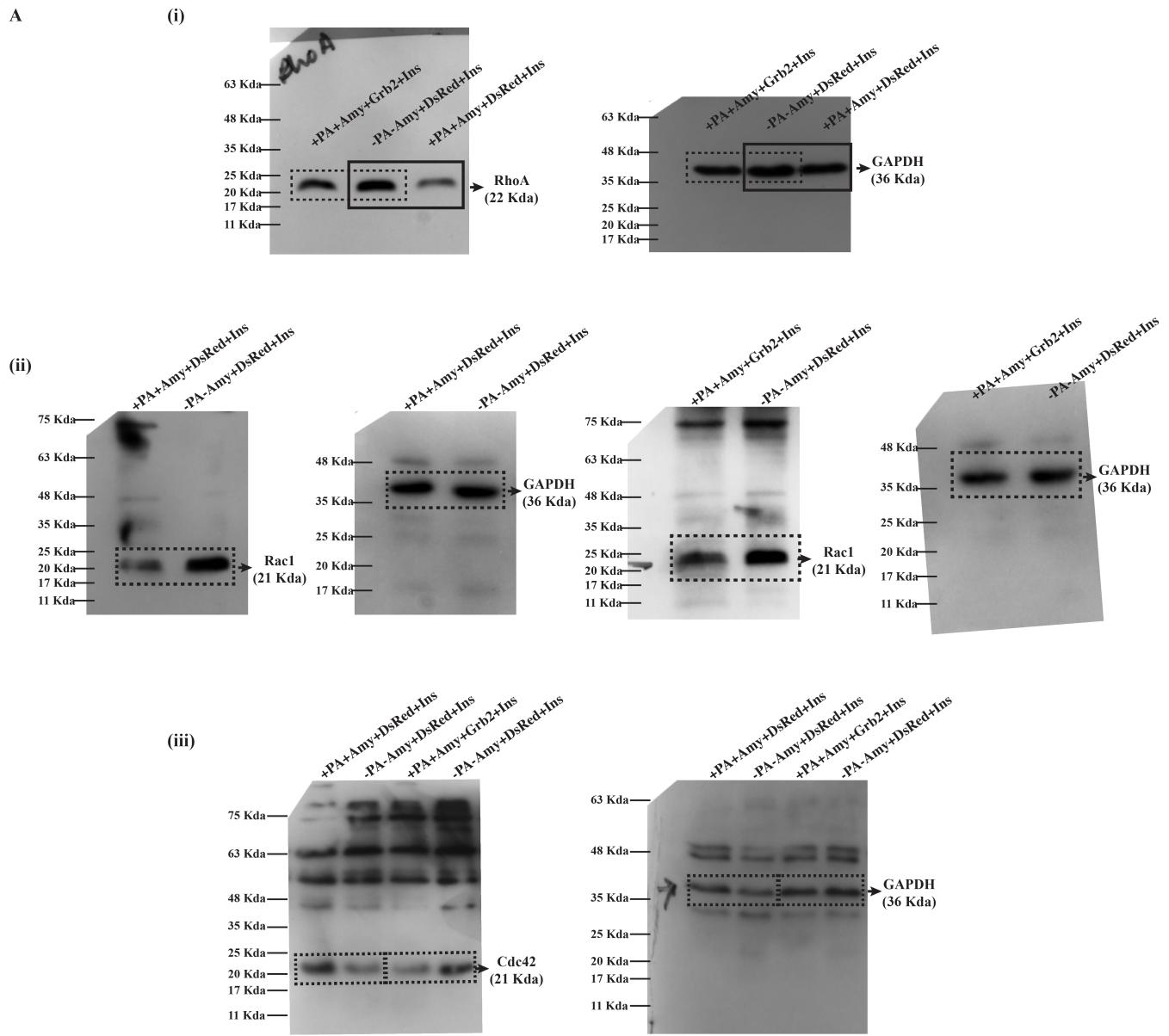
Full blots correspond to Figure 4 (C) and (E)

**Figure 5**



**Full blots correspond to Figure 5 (A), (D), and (F)**

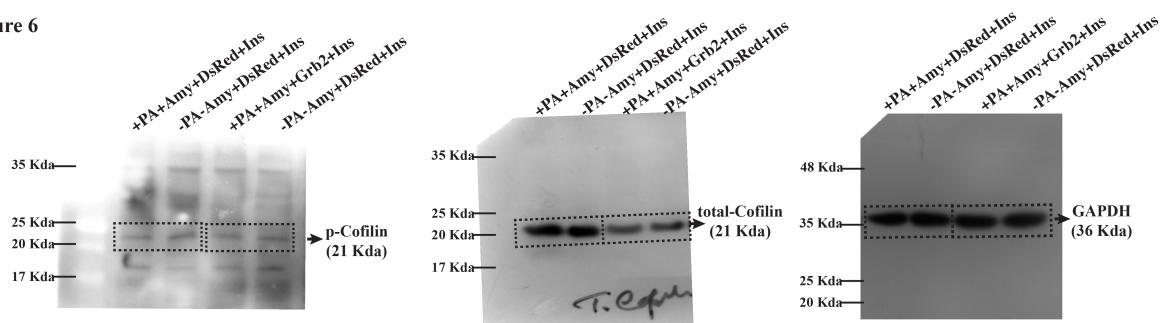
**Figure 6**



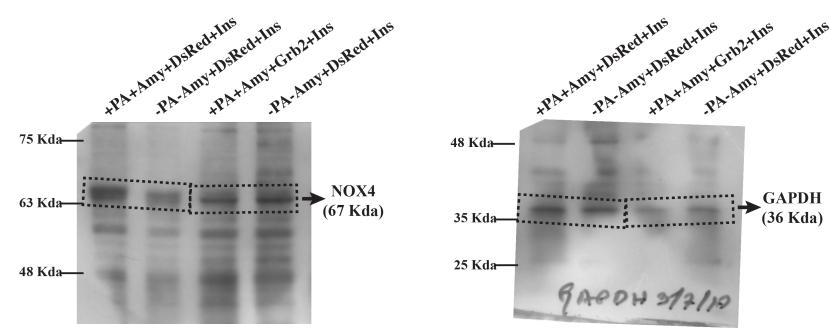
**Full blots correspond to Figure 6 (A)**

**Figure 6**

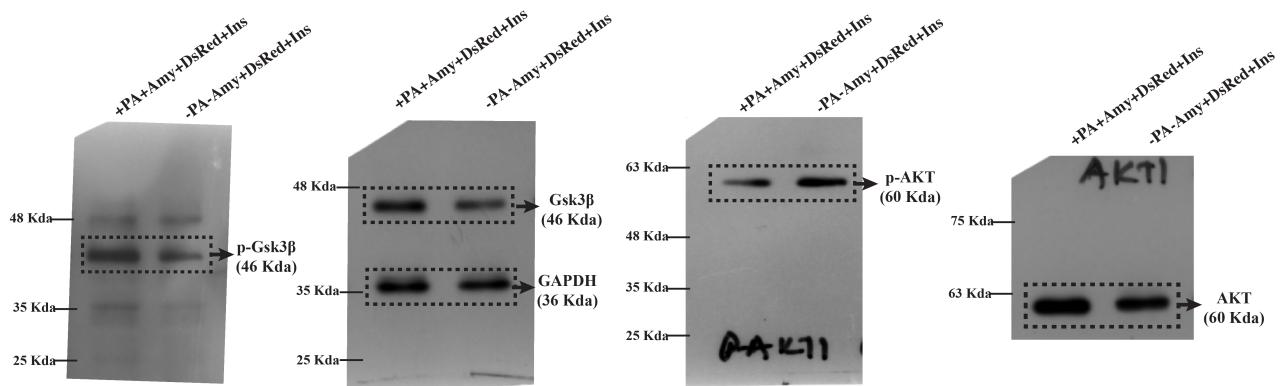
C



E

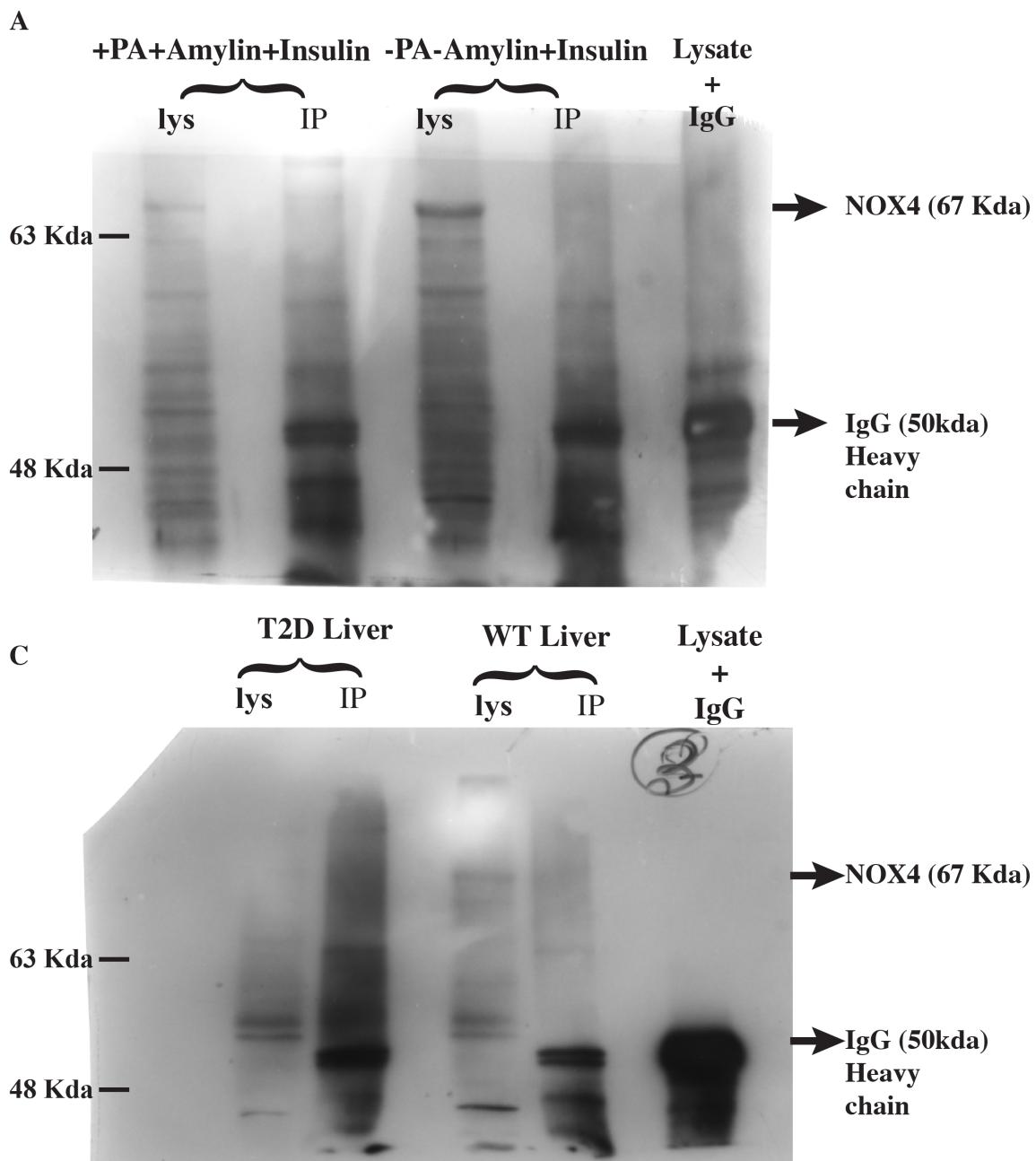


G



**Full blots correspond to Figure 6 (C), (E), and (G)**

**Figure 7**



Full blots correspond to Figure 7 (A) and (C)

**Supplementary Tables:****Table S1: Disease Lysates' Specification list****Table S1a: Whole brain lysate**

Catalog number	Lot #	Sex	Age	Ethnicity	Pathology
NB820-59177	C101138	M	98	Caucasian	Cause of death: Prostate Cancer
NB820-59177	B811092	F	60	Caucasian	Cause of death: unknown; had emphysema
NB820-59363	B909049	M	72	Caucasian	Alzheimer Disease
NB820-59363	B105129	M	75	Caucasian	Alzheimer Disease

**Table S1b: Whole liver lysate**

Catalog number	Lot #	Sex	Age	Ethnicity	Clinical diagnosis
NB820-59291	B901104	M	30	Asian	Normal
NB820-59291	B901104	M	71	Caucasian	Normal
NB820-59232	B812314	F	84	Caucasian	Type 2 Diabetes
NB820-59232	C104213	M	78	Caucasian	Type 2 Diabetes

**Table S2: List of Antibodies**

Antibody Name	Catalog Number	Dilution
<b>Grb2</b>	ab32037 (Abcam)	1:5000
<b><math>\alpha</math>-Tubulin</b>	ab4074 (Abcam)	1:5000
<b>Vimentin</b>	ab8069 (Abcam)	1:5000
<b><math>\alpha</math>-SMA</b>	ab32575 (Abcam)	1:2500
<b>Stathmin1</b>	ab52630 (Abcam)	1:10,000
<b>NOX4</b>	ab133303 (Abcam)	1:1000
<b>Phospho-Cofilin (S3)</b>	ab12866 (Abcam)	1:1000
<b>Cofilin</b>	CST-3318 (Cell Signaling Technology)	1:1000
<b>RhoA</b>	Cat # ARH05 (Cytoskeleton Inc.)	1:1000
<b>Rac1</b>	Cat # ARC03 (Cytoskeleton Inc.)	1:1000
<b>Cdc42</b>	Cat # ACD03B (Cytoskeleton Inc.)	1:1000
<b>ALK</b>	CST-3633 (Cell Signaling Technology)	1:1000
<b>RYK</b>	ab124961 (Abcam)	1:2500
<b>Pax4</b>	ab42450 (Abcam)	1:1000
<b>GAPDH</b>	ab9484 (Abcam)	1:5000
<b><math>\beta</math>-Catenin</b>	ab224803 (Abcam)	1:3000

**Table S3: Primer sequences and PCR conditions for qRT-PCR.**

Name of the genes	PCR condition	PCR Cycle	Primer sequences
<b>α-Tubulin (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'GCAGTGTTCGTAGACCTGGAA3' Reverse: 5'TTATTGGCAGCATCCTCCTT3'
<b>Vimentin (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'ATGCTTCTCTGGCACGTCTT3' Reverse: 5'AGTGAGGTCAAGCTTGAAA3'
<b>Stathmin1 (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'AGAAGGACCTTCCCTGGAG3' Reverse: 5' TTCTCATGCTCCGCTTC3'
<b>Grb2 (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'AAATGCTCAGCAAACAGCGG3' Reverse: 5'TGAAGTGCTGCACATCATTTC3'
<b>NOX4 (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'TGTTGCATGTTCAGGTGGT 3' Reverse: 5'TACTGCCAGGTCTGCTTT 3'
<b>Pax4 (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'GGCTCCCAGTGTGTCCTCTA 3' Reverse: 5'GGGACTGGGAAGAACTGGAG 3'
<b>ALK (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'CTCTGGTGCTGGTGGAGAAC 3' Reverse: 5'GTCACATCGAGGAGGGACAG 3'
<b>RYK (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'GACCTGGCTGCTAGGAAGTG 3' Reverse: 5'CCCTAGGCAGTGGTAGTCCA 3'
<b>GAPDH (mouse)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'AGCCTCGTCCCGTAGACAAAA3' Reverse: 5'TGGCAACAATCTCCACTTGC3'
<b>α-Tubulin (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'CCGGGCAGTGTGTTGTAGACT3' Reverse: 5'GCAGCATCTTCTTGCCTGT3'
<b>Vimentin (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward:5'GGCACGTCTGACCTTGAAC3' Reverse: 5'GTGAGGTCAAGCTTGAAAC3'

Name of the genes	PCR condition	PCR Cycle	Primer sequences
<b>α-SMA (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'ACCCAGCACCATGAAGATCA3' Reverse: 5'TTGCAGGTGGACAATGGAAG3'
<b>Stathmin1 (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5' AAGGATCTTCCCTGGAGGA 3' Reverse: 5' GTTTCTCAGCCAGCTGCTTC 3'
<b>Grb2 (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'AGAACTGGTACAAGGCAGAGC 3' Reverse: 5'GATAAGAAAGGCCCATCGT 3'
<b>NOX4 (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'CCGGCTGCATCAGTCTTAACC 3' Reverse: 5' TCGGCACAGTACAGGCACAA 3'
<b>ALK (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'TGGAGTTGTCACCAGTGGA3' Reverse: 5'TGTCTTCAGGCTGATGTTGC 3'
<b>RYK (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'GGCTGCCAGGAACTGTGT 3' Reverse: 5'CCCCCAGACAGTGATAGTCC 3'
<b>Nkx2-5 (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'AAGAGCTGTGCGCGCTGCAGAA 3' Reverse: 5'ATCTTGACCTGCGTGGACGTG 3'
<b>FOXD3 (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'TCTGCGAGTTCATCAGCAACG 3' Reverse: 5'TTGACGAAGCAGTCGTTGAGC 3'
<b>Pax4 (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'GCTGAAGGGTGAGTGTCCAG 3' Reverse: 5'TGGAGGAGACACTGGGAGTC 3'
<b>ARX (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5' AGCTGTCACCCAAGGAGGAG 3' Reverse: 5' GTGAAGACGTCCGGTAGTG 3'
<b>GAPDH (human)</b>	95°C→10min[95°C 30sce, 55°C 30 sec, 60°C 1min] 72°C→10min	35	Forward: 5'TCCCTGCACCACCAACTGTTAG3' Reverse: 5'GGCATGGCATGTGGTCATGAG3'

**Table S4: Primer Sequences and PCR condition for ChIP assay**

Name of the genes	PCR condition	PCR Cycle	Primer sequences
<b>Grb2 (human)</b>	95°C→7min[95°C 10sce, 55°C 10 sec, 72°C 8 sec] 72°C→1 min	40	Forward:5'TTAGGTGGTGGTGACACGCC 3' Reverse: 5'ACTGTTAGTAGAGATGGGCT 3'
<b>NOX4 (human)</b>	95°C→7min[95°C 10sce, 55°C 10 sec, 72°C 8 sec] 72°C→1 min	40	Forward:5'AATGTACCTGTCTGACAGCT 3' Reverse: 5'GTTGGAATACCCTGCCGTGT 3'

**Table S5: List of Transcription Factors of *GRB2* from MATCH output**

Factors Name	Position (Strand)	Matrix match score	Sequence (+ strand)
NKx2-5	79 (+)	1.000	tcAAGTG
	2884 (-)	1.000	CACTTga
	7553 (-)	1.000	CACTTga
	8983 (+)	1.000	tcAAGTG
v-Maf	166 (-)	0.914	ctttacttcgTCAGCaagt
ER	478 (-)	0.964	tttGGTCAAagttgccttt
	5702 (+)	0.973	ggagggtgcagTGACCtga
HNF-3beta	520 (+)	0.965	cgcattATTtcttt
Oct-1	843 (-)	0.917	attaTTTCatttca
	883 (+)	0.939	tggaaatGCAAAAtttt
	5448 (-)	0.988	ttaaTTTGCatttct
	7142 (+)	0.955	gaccatGCAAAAttca
FOXJ2	1608 (+)	0.948	gtaACAATatttcc
HNF-1	1786 (+)	0.852	gGATAAAtttagtttagctc
	4892 (+)	0.855	tGTCAAtagattaccaa
Myogenin/NF-1	2881 (+)	0.798	gatcacttgaggTTGGAgaccagcctggc
	4154 (-)	0.792	gaatggctgaaTCCAGgagacagagggtt
	8072 (+)	0.781	cgcctgtgggtgTTGGTagggagctgctc
Pax-4	3042 (-)	0.838	aaggagaatcgCTTGAacgca
	3221 (+)	0.870	tgaagTCAGGagtttagacc
	4027 (+)	0.876	cgaggTCAGGagttcaagacc
	4769 (-)	0.837	caggagaatcgCTTGAaccca
	8723 (-)	0.893	ggctggagacgCTTCActaca
CHOP-C/EBPalpha	3370 (-)	0.962	ggagaTTGCAgtg
FOXD3	3948 (-)	0.957	aaataAATAAtt
	8320 (-)	0.951	gaataAACATtg
COMP1	4261 (+)	0.840	agaaaaGATTGtcaaggccagggt
	7734 (-)	0.814	actctagcctgggCAATCttagag
	7992 (+)	0.880	tttgtgCATTGaccacaagattta
AP-1	4093 (-)	0.981	agttAGTCAGt
SREBP-1	4335 (+)	0.995	gatCACGTgag
Evi-1	5458 (-)	0.845	tTTCTTttcatatgt
	6794 (-)	0.864	aTTCTTttccttatca
CP2	5836 (+)	0.976	gctctaTCCAG
NF-Y	7799 (-)	0.981	atgATTGGttt
Retroviral Poly A	8663 (-)	0.973	cagaacggggctTTATTt

**Table S6: List of Transcription Factors of *NOX4* from MATCH output**

Factors Name	Position (Strand)	Matrix match score	Sequence (+ strand)
Oct-1	108 (-)	0.892	ggaaTTAGCattgc
	2613 (+)	0.918	ggaaatGCTAAtaat
	2648 (+)	0.923	atagatGAAAAtta
	3131 (+)	0.891	cctgatGCAAAgtgt
	5080 (+)	0.915	acttatGAAAAttaa
	6811 (+)	0.978	cagaaTTTCAtatc
NKx2-5	183 (-)	1.000	CACTTga
	318 (-)	1.000	CACTTga
	3727 (-)	1.000	CACTTga
	5776 (+)	1.000	tcAAGTG
	8743 (+)	1.000	tcAAGTG
Pax-4	187 (+)	0.874	tgaggTCAGGAGttgaagacc
	4255 (+)	0.873	tgaggTCAGGAGttcgagatc
	5783 (-)	0.901	ggccctgaccCCTGAccccc
Hand1/E47	2420 (-)	0.970	aattCCAGAttcagat
v-Myb	3610 (-)	0.971	aaCCGTTatc
	6061 (+)	0.961	agcAACGGaa
Evi-1	4148 (-)	0.874	tATCTTttttttct
	8232 (+)	0.824	caataaaaaATGATA
	9429 (+)	0.836	aaataaaaagAGGATA
CHOP-C/EBPalpha	4427 (-)	0.973	ggccaTTGCActc
HNF-3beta	4485 (-)	0.975	taaatAAATAataac
FOXD3	4486 (-)	0.955	aaataAATAAta
YY1	5103 (-)	0.993	aggagccaagATGGCcgaaat
Freac-4	5552 (+)	0.983	cttaggTAAACaaagc
Pax-6	6354 (-)	0.884	atgaaatgaagCGAGAaggga
HLF	7344 (+)	0.938	ATTACataat
CDP CR3+HD	7360 (-)	0.994	gggATCAAtt
COMP1	8171 (+)	0.819	aaaattGATAGaccactagcaaga
	9620 (-)	0.843	cgcattgccaaagtCAATCctaagc
CDP CR1	8545 (-)	0.926	caaTCAATA
	8920 (+)	0.925	tATTGAtggg

**Table S7: Statistical Data for all experiments**

Figures	Experiments		Statistical analysis
<b>Figure 1</b>	WB	<b>(A and B)</b> NOX4	NOX4 overexpressed by 1.86 fold in AD Brains compared to GAPDH. (n=2); (*;p=0.023<0.05)
	qRT-PCR	<b>(C)</b> NOX4	NOX4 transcript levels upregulated by 5.06 fold compared to GADH in APP/PS1 mouse brain tissue. (n=3); (*;p=0.039<0.05)
	WB	<b>(D and E)</b> Grb2	Grb2 overexpressed by 5.27 fold in T2D liver compared to GAPDH. (n=2); (*;p=0.017<0.05)
		<b>(D and F)</b> NOX4	NOX4 overexpressed by 2.4 fold in T2D liver compared to GAPDH, (n=2), (*;p=0.032<0.05)
	qRT-PCR	<b>(G)</b> Grb2	Grb2 transcript levels upregulated by 3.01 fold compared to GAPDH in T2D mouse model. (n=3); (*;p=0.032<0.05)
	qRT-PCR	<b>(H)</b> NOX4	NOX4 transcript levels upregulated by 1.45 fold compared to GAPDH in T2D mouse model. (n=3); (*;p=0.032<0.05)
	qRT-PCR	<b>(I)</b> miR-1271	miR- 1271upregulated by 3.879 fold compared to GAPDH control in AD cell model. (n=3); (*; p=0.0035<0.05)
<b>Figure 2</b>	qRT-PCR	<b>(A)</b> NKx2-5	Nkx2-5 transcript levels downregulated by 3.6 fold compared to GAPDH in AD cell model, (n=3), (*; p=0.0024<0.05)
		<b>(A)</b> PAX4	PAX4 transcript levels upregulated by 4.19 fold compared to GAPDH in AD cell model, (n=3), (*;p=0.045<0.05)
		<b>(A)</b> FOXD3	FOXD3 transcript levels upregulated by 2.89 fold compared to GAPDH in AD cell model, (n=3), (*;p=0.022<0.05)
	qRT-PCR	<b>(B)</b> NKx2-5	Nkx2-5 transcript levels downregulated by 2.59 fold compared to GAPDH in T2D cell model, (n=3), (*;p=0.044<0.05)
		<b>(B)</b> PAX4	PAX4 transcript levels upregulated by 4.88 fold compared to GAPDH in T2D cell model, (n=3), (*;p=0.024<0.05)

		<b>(B) FOXD3</b>	FOXD3 transcript levels upregulated by 4.39 fold compared to GAPDH in T2D cell model, (n=3), (*; p=0.046<0.05)
WB		<b>(C, D, E) PAX4</b>	<b>(C) and (D)</b> PAX4 overexpressed by 1.8 fold compared to GAPDH in AD patients' whole brain samples, (n=2), (*; p=0.014<0.05)
		<b>(C) and (E)</b> PAX4	<b>(C) and (E)</b> PAX4 overexpressed by 2 fold compared to GAPDH in T2D patients' whole liver samples, (n=2), (*; p=0.014<0.05)
		<b>(F) PAX4</b>	PAX4 downregulated by 2.99 fold in PAX4 knockdown situation in SHSY5Y cells, (n=3), (*; p=0.012<0.05).
		<b>(F) PAX4</b>	PAX4 downregulated by 1.58 fold in PAX4 knockdown situation in HepG2 cells, (n=3), (*; p=0.027<0.05).
		<b>(G) Grb2</b>	Grb2 showed no significant alteration (p=0.24>0.05; n=3) in PAX4 knockdown situation in SHSY5Y cells.
		<b>(G) Grb2</b>	Grb2 downregulated by 1.52 fold in PAX4 knockdown situation in HepG2 cells, (n=3), (*; p=0.013<0.05).
		<b>(H) NOX4</b>	NOX4 upregulated by 2.83 fold in PAX4 knockdown situation in SHSY5Y cells, (n=4); (*; p=0.0025<0.05).
		<b>(H) NOX4</b>	NOX4 showed no significant alteration (p=0.24>0.05; n=5) in PAX4 knockdown situation in HepG2 cells.
<b>Figure 3</b>		<b>(A) NKx2-5</b>	Nkx2-5 transcript levels upregulated by 5.75 fold compared to control siRNAs in ALK and RYK double knock down condition in SHSY5Y cells, (n=4), (*; p=0.016<0.05)
		<b>(A) PAX4</b>	PAX4 transcript levels upregulated by 5.84 fold compared to control siRNAs in ALK and RYK double knock down condition in SHSY5Y cells, (n=3), (**; p=0.00015<0.001)
		<b>(A) FOXD3</b>	FOXD3 transcript levels upregulated by 3.13 fold compared to control siRNAs in ALK and RYK double knock down condition in SHSY5Y cells, (n=4), (*; p=0.045<0.05)
	qRT-PCR	<b>(B) NKx2-5</b>	Nkx2-5 showed no significant alteration of transcript level (p=0.24>0.05; n=5) in ALK and RYK double knock down condition in HepG2 cells, (n=3), (N.S.; p=0.15>0.05)

<b>Figure 4</b>	WB	<b>(B) PAX4</b>	PAX4 transcript levels upregulated by 4.81 fold compared to control siRNAs in ALK and RYK double knock down condition in HepG2 cells, (n=3), (*; p=0.003<0.05)
			FOXD3 transcript levels upregulated by 2.46 fold compared to control siRNAs in ALK and RYK double knock down condition in HepG2 cells, (n=4), (*; p=0.041<0.05)
		<b>(C, D, E) PAX4</b>	<b>(C) and (D)</b> PAX4 overexpressed by 1.65 fold compared to control siRNAs in ALK and RYK double knock down condition in SHSY5Y cells, (n=3), (*; p=0.026<0.05)
			<b>(C) and (E)</b> PAX4 overexpressed by 1.98 fold compared to control siRNAs in ALK and RYK double knock down condition in HepG2 cells, (n=3), (*; p=0.004<0.05)
	ChIP qRT-PCR	Grb2	<b>(F)</b> PAX4 binding significantly increase the Grb2 expression levels by 27.49 fold in AD cell model, (n=3), (*; p=0.005<0.05)
			<b>(G)</b> PAX4 binding significantly increase the Grb2 expression levels by 18.33 fold in T2D cell model, (n=3), (*; p=0.019<0.05)
		NOX4	<b>(F)</b> PAX4 binding showed no significant alteration of NOX4 transcript level in AD cell model. (N.S.; p=0.18>0.05)
			<b>(G)</b> PAX4 binding showed no significant alteration of NOX4 transcript level in T2D cell model. (N.S.; p=0.15>0.05)
	qRT-PCR	<b>(A) ARX</b>	ARX transcript level upregulated by 3.35 fold in PAX4 knockdown condition compared to mock siRNAs in SHSY5Y cells. (n=5); (*p=0.016<0.05).
			ARX transcript level upregulated by 3.13 fold in PAX4 knockdown condition compared to mock siRNAs in HepG2 cells. (n=8); (*p=0.0012<0.05).
		<b>(B) ARX</b>	ARX transcript level downregulated by 2.6 fold in AD cell model (AICD+A $\beta$ ) compared to control condition (GFP+DMSO). (n=3); (*p=0.04<0.05).
			ARX transcript level downregulated by 3.7 fold in T2D cell model (+PA+Amylin+Insulin) compared to control condition (-PA-Amylin+Insulin). (n=4); (**p=0.0003<0.001).

<b>Figure 5</b>	WB	<b>(C and D) <math>\beta</math>-Catenin</b>	ARX transcript level downregulated by 3 fold in ALK and RYK double knockdown condition compared to mock siRNAs in SHSY5Y cells. (n=3); *p=0.03<0.05).
			ARX transcript level downregulated by 3.7 fold in ALK and RYK double knockdown condition compared to mock siRNAs in HepG2 cells. (n=3); *p=0.02<0.05).
			<b>(C) (i) and (D)</b> $\beta$ -Catenin downregulated by 3.5 fold in AD cell model, (n=3), (**p=0.0006<0.001)
			<b>(C) (ii) and (D)</b> $\beta$ -Catenin downregulated by 1.5 fold in T2D cell model, (n=3), (**p=0.0006<0.001)
	WB	<b>(E and F) <math>\beta</math>-Catenin</b>	<b>(E) (i) and (F)</b> $\beta$ -Catenin downregulated by 1.15 fold in ALK and RYK double knockdown condition in SHSY5Y cells, (n=3), (*p=0.015<0.05)
			<b>(E) (ii) and (F)</b> $\beta$ -Catenin downregulated by 6.5 fold in ALK and RYK double knockdown condition in HepG2 cells, (n=2), (*p=0.013<0.05)
			<b>(A) (i), (B) <math>\alpha</math>-Tubulin</b> showed no significant alteration in T2D liver lysate (n=2), (p=0.19>0.05)
			<b>(A) (ii), (B) Vimentin</b> downregulated by 1.83 fold in T2D liver lysate compared to WT (n=2), (*p=0.011<0.05)
	qRT-PCR	<b>(A) (iii), (B) <math>\alpha</math>-SMA</b>	$\alpha$ -SMA downregulated by 1.68 fold in T2D liver lysate compared to WT (n=2), (*p=0.044<0.05)
		<b>(A) (iv), (B) Stathmin1</b>	Stathmin1 downregulated by 1.95 fold in T2D liver lysate compared to WT (n=2), (*p=0.024<0.05)
		<b>(C) <math>\alpha</math>-Tubulin</b>	$\alpha$ -Tubulin downregulated by 5.3 fold in T2D mouse model compared to WT (n=3), (*p=0.0013<0.05)
		<b>(C) Vimentin</b>	Vimentin downregulated by 6.49 fold in T2D mouse model compared to WT (n=3), (*p=0.017<0.05)
		<b>(C) <math>\alpha</math>-SMA</b>	$\alpha$ -SMA downregulated by 2 fold in T2D mouse model compared to WT (n=3), (*p=0.028<0.05)
	WB	<b>(C) Stathmin1</b>	Stathmin1 downregulated by 2.9 fold in T2D mouse model compared to WT (n=3), (*p=0.009<0.05)
		<b>(D) (i), (E) <math>\alpha</math>-Tubulin</b>	$\alpha$ -Tubulin downregulated by 2.7 fold in T2D cell model compared to WT (n=2), (**p=0.00017<0.001)
		<b>(D) (ii), (E) Vimentin</b>	Vimentin downregulated by 1.98 fold in T2D cell model compared to WT (n=2), (*p=0.037<0.05)

		<b>(D) (iii), (E) <math>\alpha</math>-SMA</b>	$\alpha$ -SMA downregulated by 1.27 fold in T2D cell model compared to WT (n=4), (*; p=0.004<0.05)
		<b>(D) (iv), (E) Stathmin1</b>	Stathmin1 downregulated by 1.97 fold in T2D cell model compared to WT (n=4), (**; p<0.0001)
WB	<b>(F), (G) <math>\alpha</math>-Tubulin</b>		$\alpha$ -Tubulin level downregulated by 2.64 fold in ALK and RYK double knockdown condition compared to mock siRNAs in SHSY5Y cells. (n=3), (*; p=0.0507≈0.05)
			$\alpha$ -Tubulin level downregulated by 1.42 fold in ALK and RYK double knockdown condition compared to mock siRNAs in HepG2 cells. (n=3), (*; p=0.019<0.05)
qRT-PCR	<b>(H) <math>\alpha</math>-Tubulin</b>		$\alpha$ -Tubulin transcript level downregulated by 2.3 fold in ALK and RYK double knockdown condition compared to mock siRNAs in SHSY5Y cells. (n=3), (*; p=0.03<0.05)
			$\alpha$ -Tubulin transcript level downregulated by 1.5 fold in ALK and RYK double knockdown condition compared to mock siRNAs in HepG2 cells. (n=3), (*; p=0.021<0.05)
qRT-PCR	<b>(I) <math>\alpha</math>-Tubulin</b>		$\alpha$ -Tubulin level downregulated by 1.58 fold in the T2D cell model. (n=3), (*; p=0.018<0.05)
			$\alpha$ -Tubulin level upregulated by 1.24 fold in the T2D cell model along with Grb2 overexpression. (n=3), (*; p=0.018<0.05)
	<b>(I) Vimentin</b>		Vimentin level downregulated by 2.12 fold in the T2D cell model. (n=3), (*; p=0.024<0.05)
			Vimentin level upregulated by 1.15 fold in the T2D cell model along with Grb2 overexpression. (n=3), (*; p=0.037<0.05)
	<b>(I) <math>\alpha</math>-SMA</b>		$\alpha$ -SMA level downregulated by 2.2 fold in the T2D cell model. (n=3), (*; p=0.027<0.05)
			$\alpha$ -SMA level upregulated by 2.76 fold in the T2D cell model along with Grb2 overexpression. (n=3), (*; p=0.023<0.05)
<b>Figure 6</b>	WB	<b>(A) (i), (B) RhoA</b>	RhoA downregulated by 2.13 fold in the T2D cell model compared to WT (n=3), (*; p=0.012<0.05)
			RhoA downregulated by 1.22 fold in the T2D cell model along with the overexpressed Grb2 compared to WT (n=3), (*; p=0.025<0.05)

		<b>(A) (ii), (B)</b> Rac1	Rac1 downregulated by 1.63 fold in the T2D cell model compared to WT (n=3), (*; p=0.0051<0.05)
		<b>(A) (iii), (B)</b> Cdc42	Rac1 downregulated by 1.26 fold in the T2D cell model along with the overexpressed Grb2 compared to WT (n=3) (*; p=0.0065<0.05)
		<b>(C) and (D)</b> Cofilin	Cdc42 upregulated by 1.36 fold in the T2D cell model compared to WT (n=3), (*; p=0.013<0.05)
		<b>(C) and (D)</b> Cofilin	Cdc42 downregulated by 2.05 fold in the T2D cell model along with the overexpressed Grb2 compared to WT (n=3) (*; p=0.02<0.05)
	WB	<b>(E) and (F)</b> NOX4	The Cofilin activation level downregulated by 1.43 fold in the T2D cell model compared WT(n=3) (*; p = 0.011<0.05)
	WB	<b>(E) and (F)</b> NOX4	The Cofilin activation level showed no significant alteration in the T2D cell model along with overexpressed Grb2 compared to WT (n=3) (N.S; p=0.99)
	Co-IP	<b>(A) and (B)</b> IB: NOX4 IP: Grb2	NOX4 upregulated by 1.31 fold in the T2D cell model compared to WT (n=3) (*; p = 0.042<0.05)
	Co-IP	<b>(C) and (D)</b> IB: NOX4 IP: Grb2	NOX4 and Grb2 interaction upregulated by 2.87 fold in the T2D mouse model compared to WT.
<b>Figure 7</b>	ROS activity	<b>(E) and (F)</b> CMH2-DCFDA	The CMH2-DCFDA absorbance upregulated by 1.32 fold in T2D cell model compared to WT (n=3) (*; p=0.0346<0.05)
		<b>(E) and (F)</b> CMH2-DCFDA	The CMH2-DCFDA absorbance upregulated by 3.57 fold in T2D cell model along with overexpressed Grb2 compared to WT (n=3) (*; p=0.005<0.05)