

Correction

Correction: Up-regulated ENO1 promotes the bladder cancer cell growth and proliferation via regulating β -catenin



This Correction follows an Expression of Concern relating to this article previously published by Portland Press.

The authors of the original article “Up-regulated ENO1 promotes the bladder cancer cell growth and proliferation via regulating β -catenin” (*Biosci Rep* (2019) 39(9); <https://doi.org/10.1042/BSR20190503>) would like to correct the western blots in their figures. The authors state that in their original Figures 1-5, the western blot bands were obscure due to the chemiluminescence machine used. They have repeated the whole experiment on request by the Editorial Board, with a higher resolution setting. The authors declare that the results of their new experiment do not affect the results and conclusions of their original article.

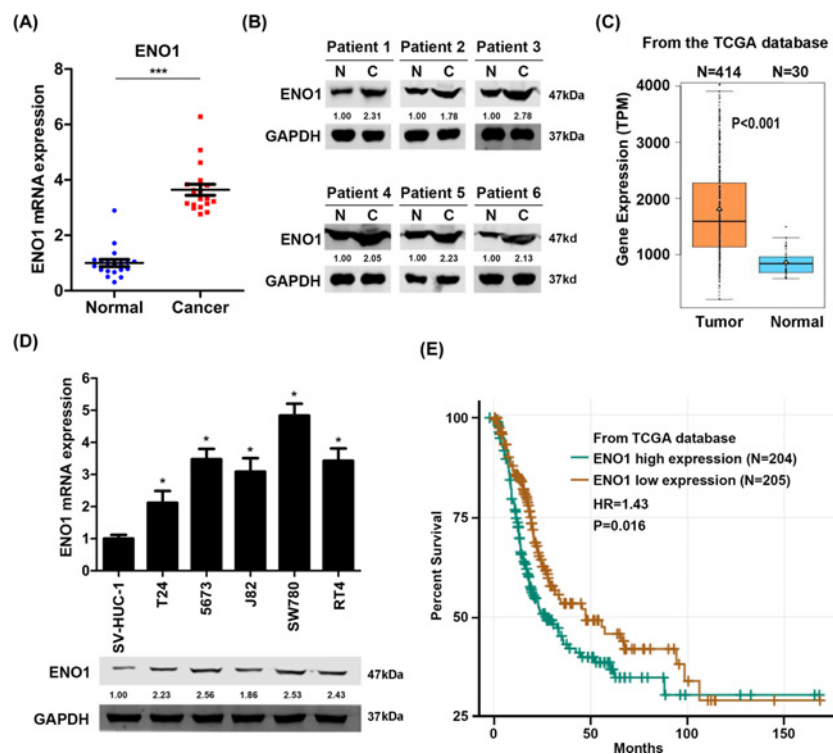


Figure 1. ENO1 expression is increased in BC tissues and cells

(A) qRT-PCR analysis of ENO1 in BC and normal tissues. ENO1 expression in BC tissues was normalized to ENO1 expression in normal tissues. $n = 19$ in normal, $n = 19$ in cancer. $***P < 0.001$. (B) Western blot analysis of ENO1 in bladder cancer and adjacent normal tissues. (C) mRNA level of ENO1 in bladder cancer and normal tissues that were analyzed from TCGA database. TPM, transcripts per million. $P < 0.001$. (D) qRT-PCR and Western blot analysis of ENO1 in bladder epithelial cells SV-HUC-1 and in BC cells T24, 5637, J82, SW780 and RT4. ENO1 expression in T24, 5637, J82, SW780 and RT4 was normalized to ENO1 expression in SV-HUC-1 cells. $*P < 0.05$, $**P < 0.01$. (E) The overall survival of bladder cancer patients who were divided into ENO1 high- and low-expression groups that were analyzed from TCGA database. $n = 204$ in low-expression group, $n = 205$ in high-expression group. $P = 0.016$.

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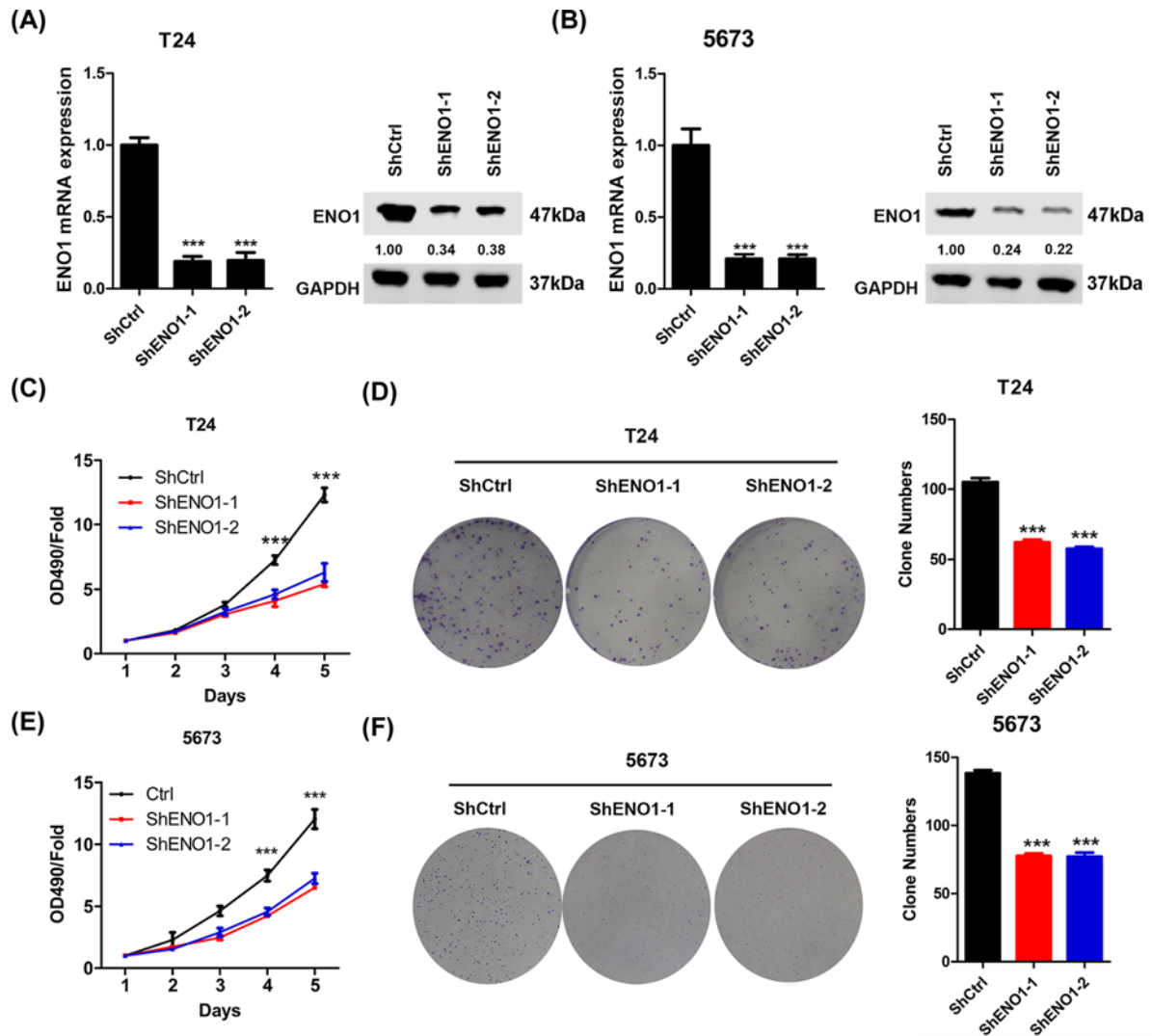


Figure 2. ENO1 knockdown inhibits the proliferation and colony formation of bladder cancer cells

(A) T24 cells were infected with shCtrl, shENO1-1 and shENO1-2 lentivirus for three times and then were subjected to qRT-PCR and Western blot analysis of ENO1. $***P < 0.001$. (B) 5673 cells were infected with shCtrl, shENO1-1 and shENO1-2 lentivirus for three times and then were subjected to qRT-PCR and Western blot analysis of ENO1. $***P < 0.001$. (C) shCtrl, shENO1-1 and shENO1-2 T24 cells were subjected to CCK analysis of proliferation. $***P < 0.001$. (D) Cells described in (C) were subjected to colony formation analysis. Left, representative images. Right, quantification results. $***P < 0.001$. (E) shCtrl, shENO1-1 and shENO1-2 5673 cells were subjected to CCK analysis. $***P < 0.001$. (F) Cells described in (E) were subjected to colony formation analysis. Left, representative images. Right, quantification results. $***P < 0.001$.

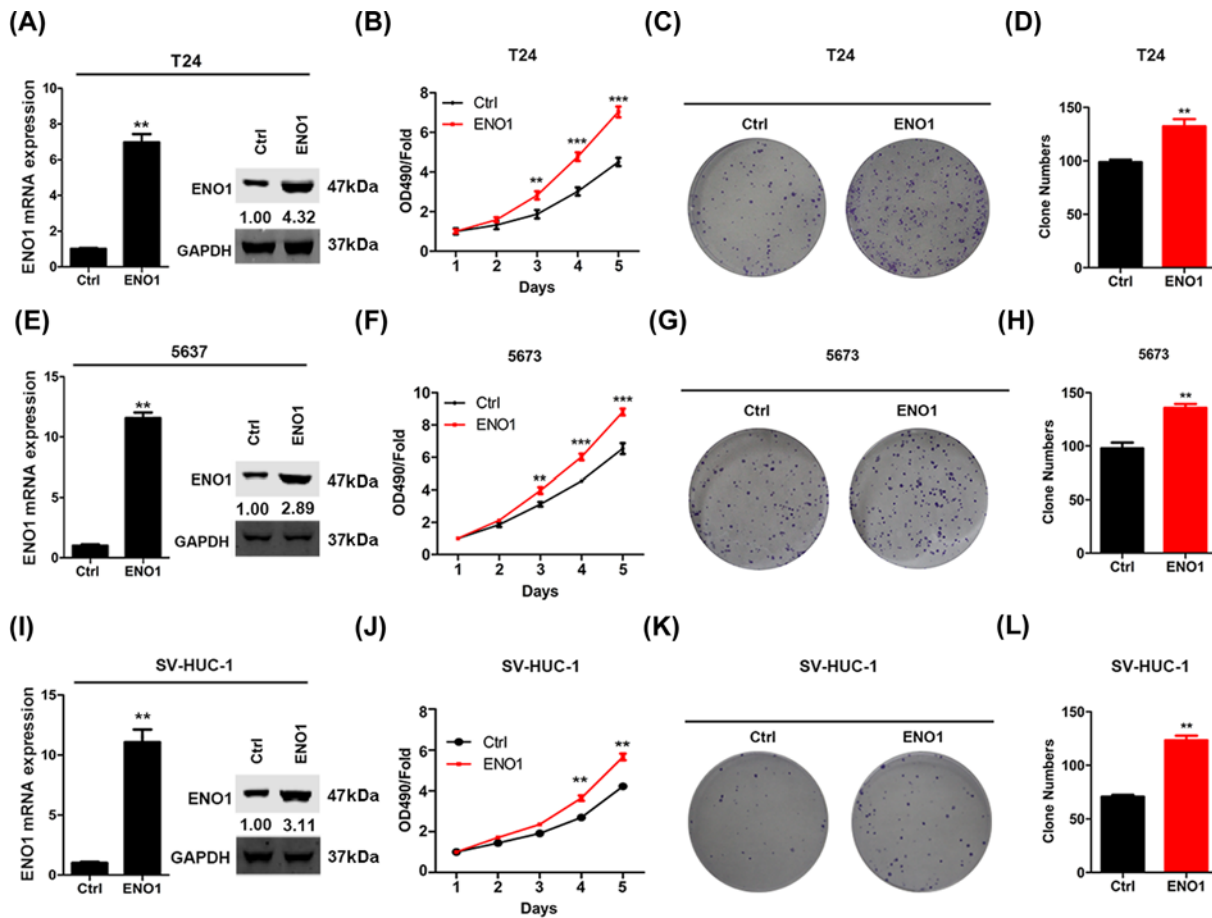


Figure 3. ENO1 knockdown inhibits the proliferation and colony formation of bladder cancer cells

(A) T24 cells were infected with Ctrl and ENO1 over-expression lentivirus and then were subjected to qRT-PCR and Western blot analysis of ENO1. $***P < 0.001$. (B) 5637 cells were infected with Ctrl and ENO1 over-expression lentivirus and then were subjected to qRT-PCR and Western blot analysis of ENO1. $***P < 0.001$. (C) SV-HUC-1 cells were infected with Ctrl and ENO1 over-expression lentivirus and then were subjected to qRT-PCR and Western blot analysis of ENO1. $***P < 0.001$. (D–F) Ctrl and ENO1 over-expressed T24 cells were subjected to CCK analysis of proliferation (D) and colony formation assay (E and F). $**P < 0.01$, $***P < 0.001$. (G–I) Ctrl and ENO1 over-expressed 5637 cells were subjected to CCK analysis of proliferation (G) and colony formation assay (H and I). $**P < 0.01$, $***P < 0.001$. (J–L) Ctrl and ENO1 over-expressed SV-HUC-1 cells were subjected to CCK analysis of proliferation (J) and colony formation assay (K and L). $**P < 0.01$.

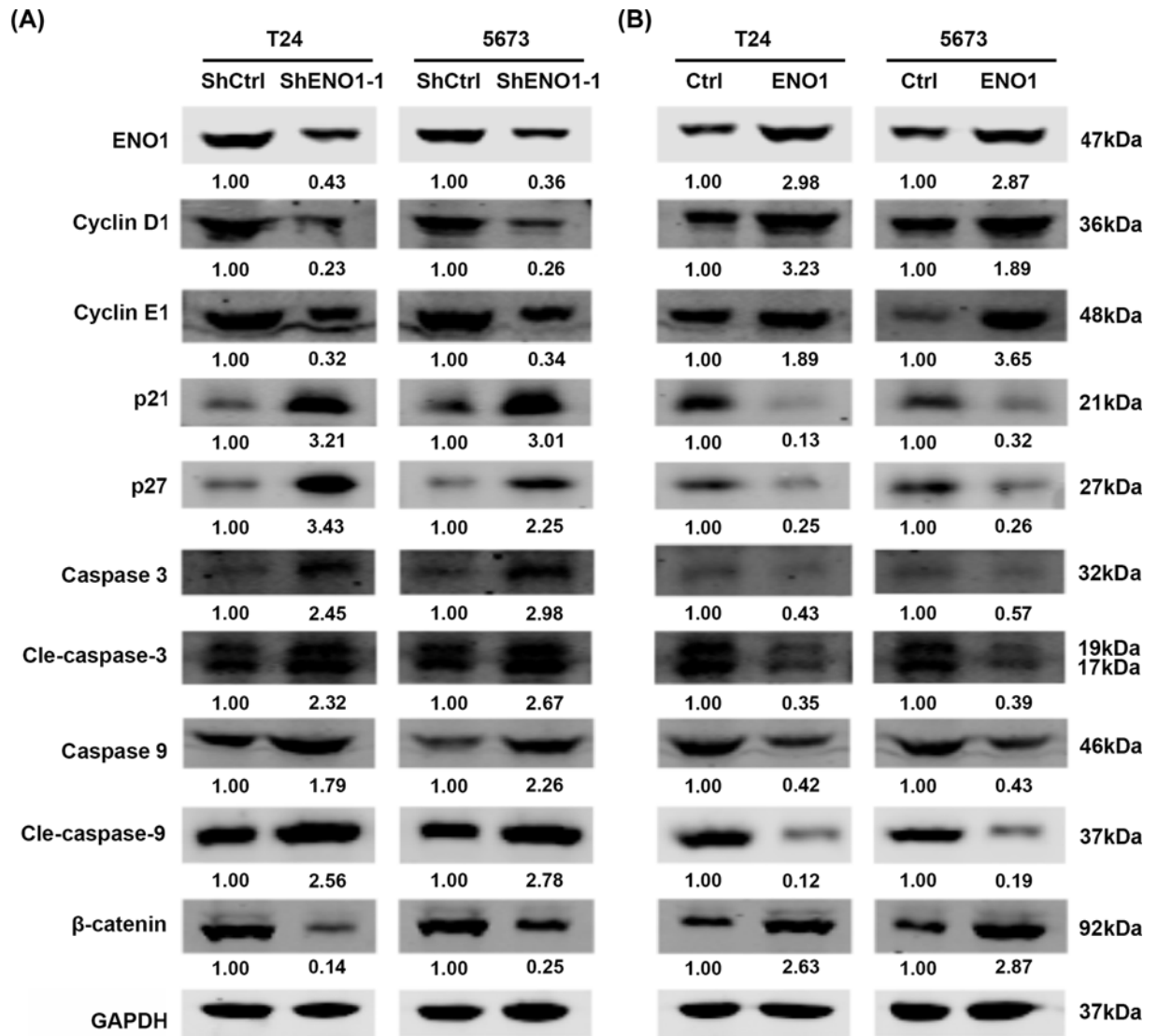


Figure 4. ENO1 regulates cell cycle, apoptosis and enhances β -catenin signaling pathway in bladder cancer cells

(A) Western blot analysis of ENO1, cyclin D1, cyclin E1, p21, p27, caspase 3, caspase 9 and β -catenin in shCtrl and shENO1-1 T24 and 5673 cells. (B) Western blot analysis of ENO1, cyclin D1, cyclin E1, p21, p27, caspase 3, cleaved caspase 3, caspase 9, cleaved caspase 9 and β -catenin in Ctrl and ENO1 over-expressed T24 and 5673 cells.

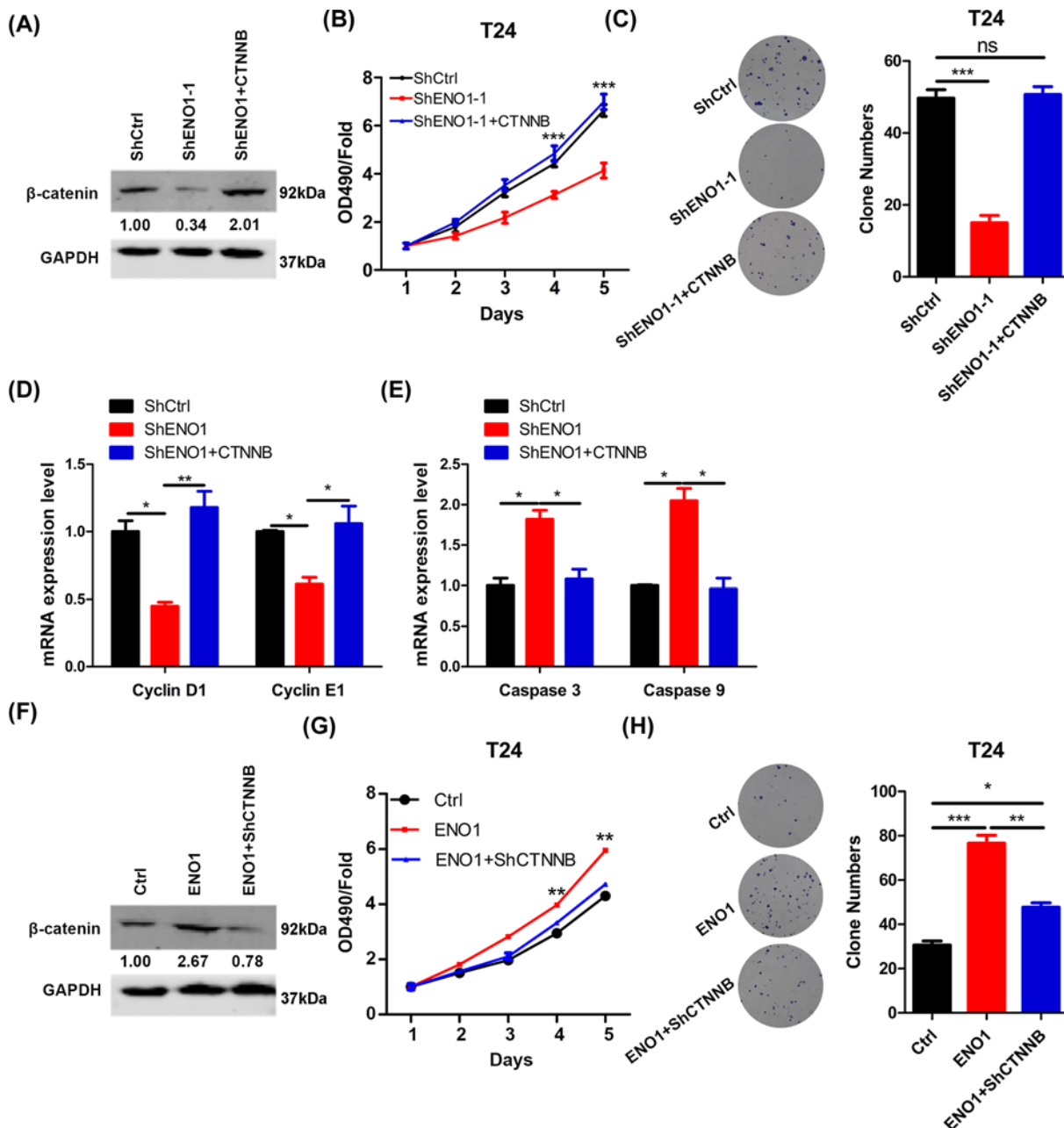


Figure 5. ENO1 up-regulation of β -catenin promotes the bladder cancer cell proliferation and colony formation

(A) β -catenin was over-expressed in shENO1-1 T24 cells and the cells (shCtrl, shENO1-1, shENO1-1+CTNNB) were subjected to Western blot analysis of β -catenin. (B) shCtrl, shENO1-1 and shENO1-1 with over-expressed β -catenin T24 cells were subjected to CCK analysis of proliferation. *** $P < 0.001$. (C) The cells described in B were subjected to colony formation analysis. Left, representative images. Right, quantification results. *** $P < 0.001$. (D and E) qRT-PCR results of cyclin D1 and E1 (D), caspase 3 and 9 (E) in the cells described in B. * $P < 0.05$, ** $P < 0.01$. (F) β -catenin was silenced in ENO1 over-expressed T24 cells and the cells (Ctrl, ENO1, ENO1+shCTNNB) were subjected to Western blot analysis of β -catenin. (G) Ctrl, ENO1 and ENO1+shCTNNB T24 cells were subjected to CCK analysis of proliferation. ** $P < 0.01$. (H) The cells described in B were subjected to colony formation analysis. Left, representative images. Right, quantification results. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.