

Figure S1. H4 cells were examined under a bright field microscope. Cell morphology was observed following exposure to no pressure (control), 0.75 and 1.5 mmHg for 12 h. Scale bar, 200 μ m.

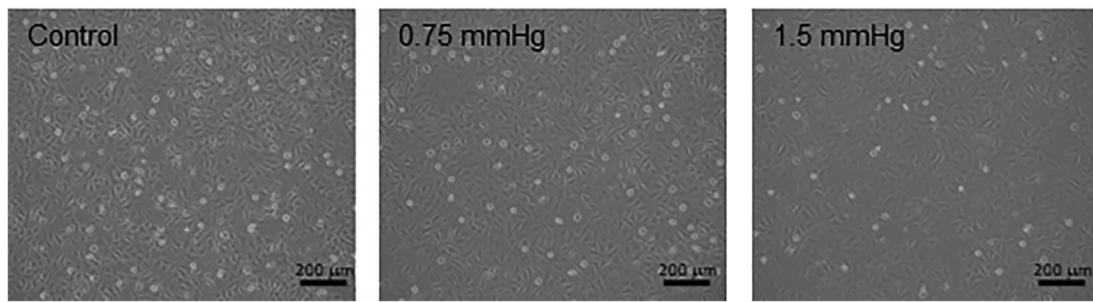


Figure S2. (A) A172 and (B) U87MG cells were subjected to compression for 12 h, and the gene expression levels of *PIEZO1* and *GDF15* were evaluated by reverse transcription-quantitative PCR. n=3 independent experiments; *P<0.05, **P<0.01 determined by unpaired t-test. GDF15, growth differentiation factor 15.

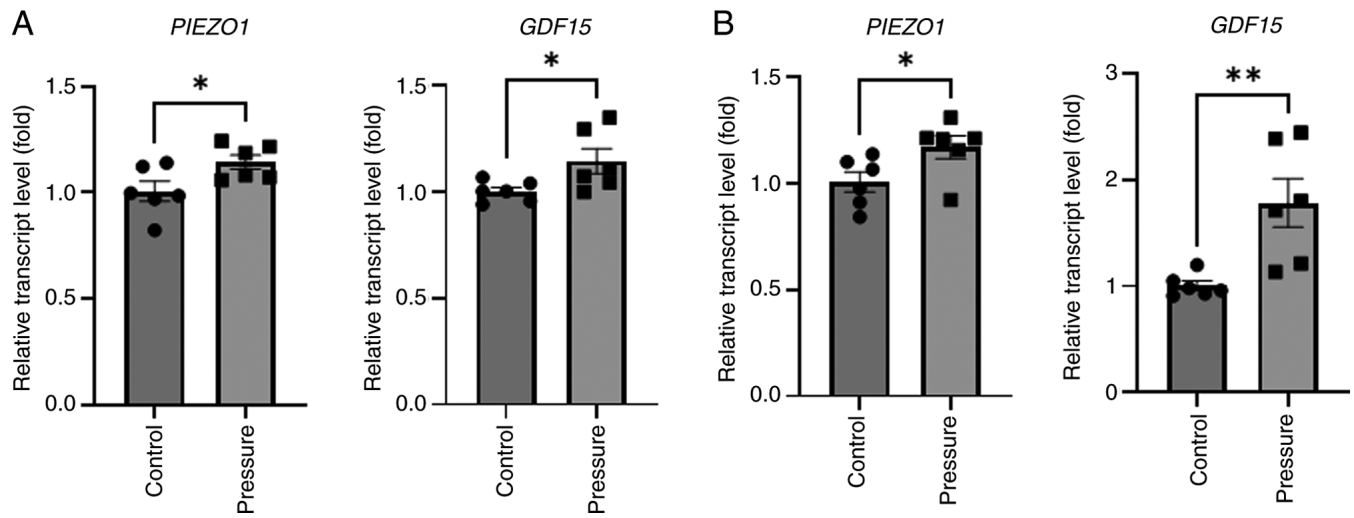


Figure S3. H4 cells were put under pressure for 12 h, then the pressure was removed and the cells were harvested 12 and 24 h later. The gene expression levels of (A) *PIEZO1* and (B) *GDF15* were determined by reverse transcription-quantitative PCR. n=3 independent experiments for each gene; *P<0.05, **P<0.01, ****P<0.0001 determined by one-way ANOVA and Tukey's test. *GDF15*, growth differentiation factor 15; ns, not significant.

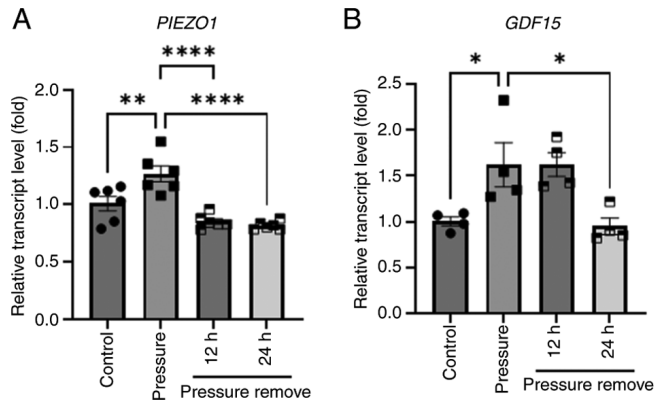


Figure S4. Gene expression of *GDF15* was successfully reduced by siRNA. While pressure increases *GDF15* expression, transfection of *GDF15* siRNA inhibited the expression of *GDF15*. * $P < 0.05$, ** $P < 0.01$, **** $P < 0.0001$ determined by one-way ANOVA and Tukey's test. Con, control; *GDF15*, growth differentiation factor 15; ns, not significant; siRNA, small interfering RNA.

