

Figure S1 Extraction schematic of mouse cartilage (A-C) and chondrocyte culture (D-F), Div: Days in vitro.

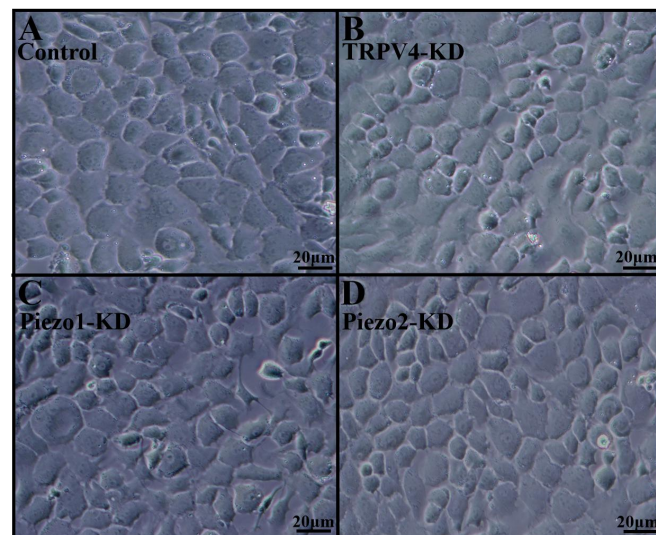


Figure S2 The cell morphology of (A) Control, (B) TRPV4-KD, (C) Piezo1-KD, or (D) Piezo2-KD cells which plated on 6-well BioFlex[®] plates, respectively.

Table S1. Average properties of $[Ca^{2+}]_i$ oscillation for Control, TRPV4-KD, Piezo1-KD, and Piezo2-KD cells (mean±standard deviation).

	Control (n=42)	TRPV4-KD (n=44)	Piezo1-KD (n=47)	Piezo2-KD (n=39)
Cellular Ca^{2+} response rates (%)	18.76±1.22	16.31±1.45	15.99±1.53	17.11±1.66
Oscillation amplitude	3.66±0.34	3.28±0.21	3.07±0.19 ↓	3.34±0.25
Oscillation frequency (Peaks/min)	0.17±0.01	0.18±0.01	0.16±0.01	0.17±0.01

Data were pooled from $n=42$ cells, $n=44$ cells, $n=47$ cells, and $n=39$ cells for Control, TRPV4-KD, Piezo1-KD, and Piezo2-KD, respectively. Data are represented as the mean±standard deviation of three independent experiments.