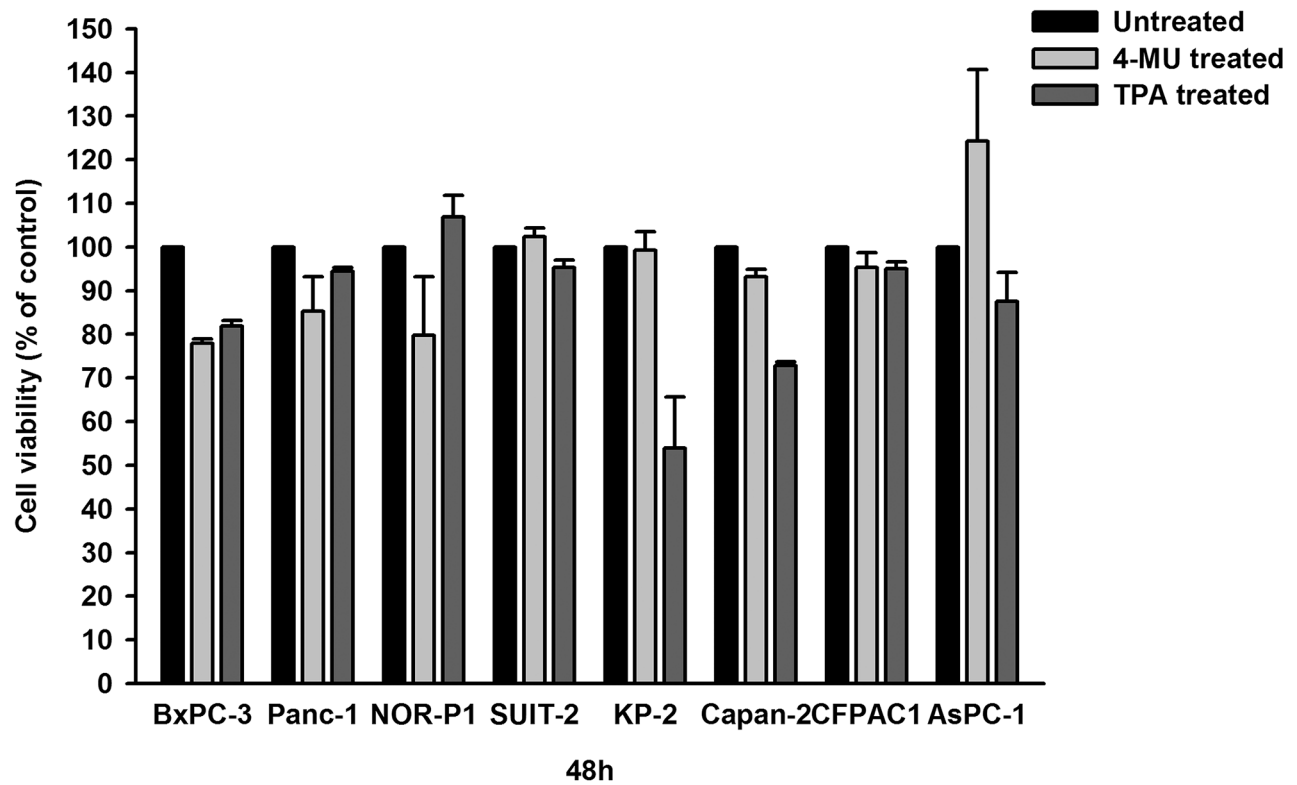
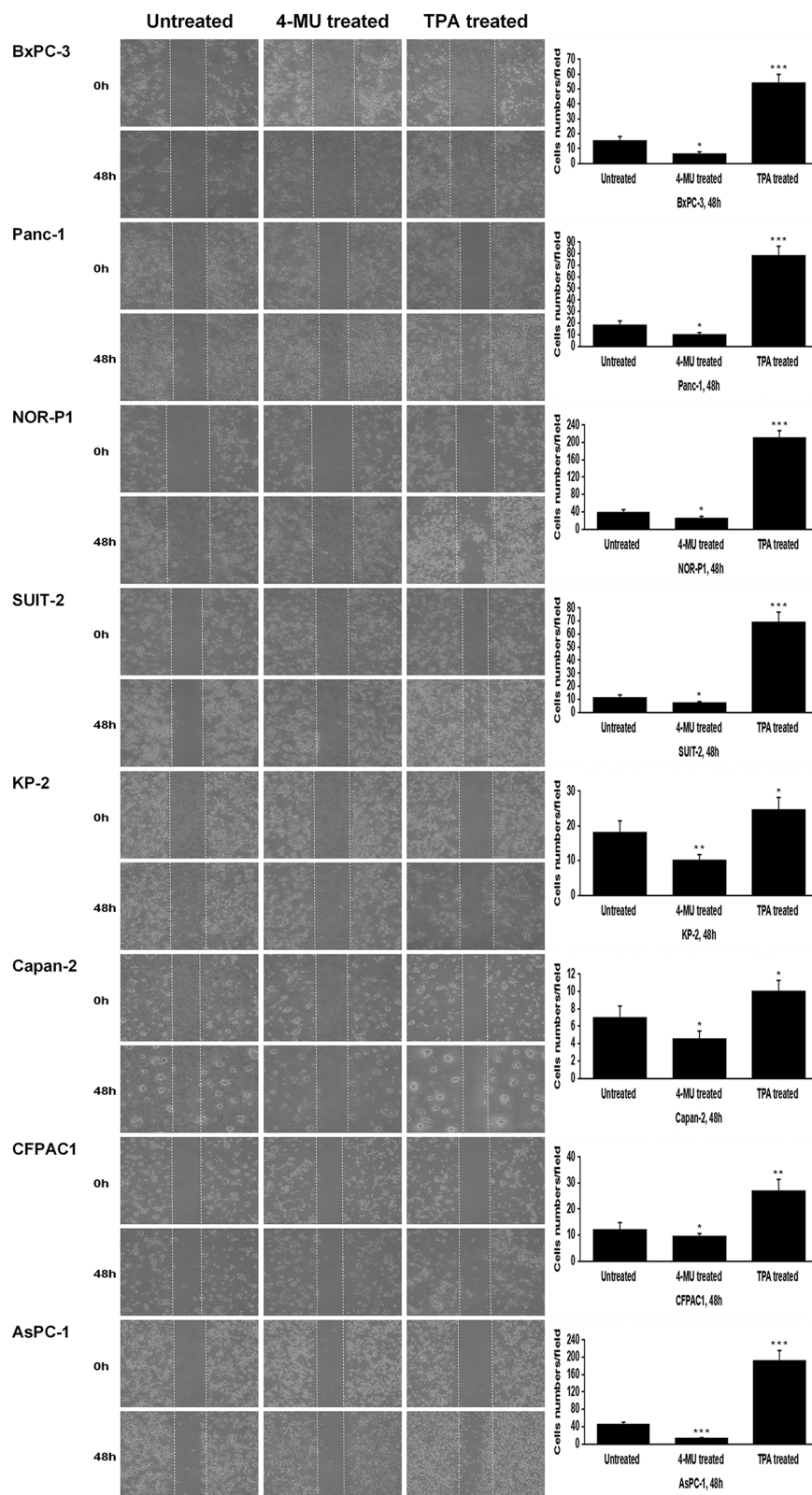


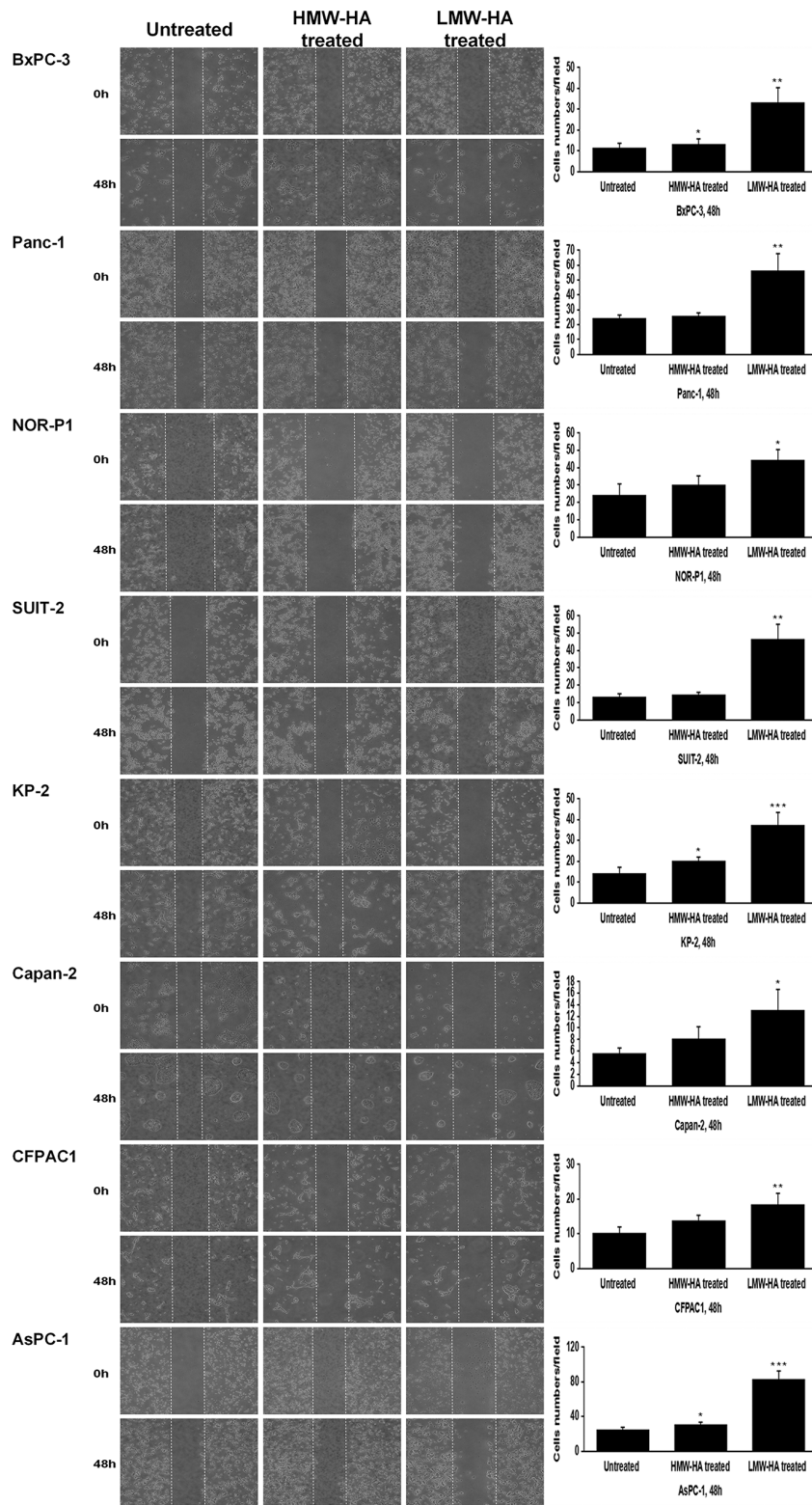
## SUPPLEMENTARY FIGURES LEGENDS



**Supplementary Figure S1: Cell viability of PDAC cells after treatment with 4-MU or TPA.** No significant cytotoxicity was noted after treatment with 4-MU (1000  $\mu$ M) or TPA (100 ng/ml) for 48h. Each bar represents the mean  $\pm$  SD of three replications.



**Supplementary Figure S2: Changes in migration of PDAC cells after treatment with 4-MU or TPA by wound healing assay (original magnification 5×).** The migrating cells were significantly decreased after treatment with 4-MU and increased after treatment with TPA (\* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ , paired t test). Each bar represents the mean  $\pm$  SD of six replications.



**Supplementary Figure S3: Effects of HMW-HA and LMW-HA on migration of PDAC cells assessed by wound healing assay (original magnification 5×).** The number of migrating cells was significantly increased by HMW-HA (200 µg/ml) in three cell lines (BxPC-3, KP-2, and AsPC-1) and, more robustly, by LMW-HA (200 µg/ml) in all the cell lines (\* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ , paired t test). Each bar represents the mean  $\pm$  SD of six replications.