**Figure W3A:**

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*Activation of proton secretion ($r_{\text{max}}/r_{\text{eq}}$ in %) in early and late passage osteoblasts and in SAOS-2 osteosarcoma cells upon stimulation by PMA or TNF-α*

Cells were activated with PMA at the concentrations shown and the metabolic activation was recorded by a cytosensor microphysiometer (early passage osteoblasts: black squares; late passage osteoblasts: open squares; SAOS-2 osteosarcoma: black circles). The amount of 100% acidification represents the equilibrium value for proton secretion of the cells without stimulation. Each data point represents the mean value $x_i$ of $n$ individual measurements (early passage osteoblasts: $n = 3$ or $4$; late passage osteoblasts: $n = 2$ to $5$; SAOS-2: $n = 5$ to $10$) and the error bars represent the normalized standard deviations of $x_i$. Overall, late passage osteoblasts show little acidification rates when compared to early passage osteoblasts or osteosarcoma cells. Because of procedural variability in determining
the $r(t)/r_{eq}$ rates, only changes in acidification rates exceeding 5% are regarded as a sizeable change.