

Table W1. Changes in Endogenous Enzyme Activities for PC-3 Cells and HUVECs under Different Conditions in Relation to the Invasion Index Measurements.

Experimental Condition	Invasion Index $I(t)$ (MR Experiments)	Endogenous Enzyme Activity per Cell of		
		MMP-2	MMP-9	uPA
PC-3 _{Bb} on ECM	20% O ₂ > 1% O ₂	20% O ₂ < 1% O ₂	20% O ₂ < 1% O ₂	20% O ₂ < 1% O ₂
PC-3 _T	N/A	20% O ₂ < 1% O ₂	20% O ₂ < 1% O ₂	20% O ₂ < 1% O ₂
PC-3 _{Bb} on HuvECM	20% O ₂ > 1% O ₂	20% O ₂ > 1% O ₂	20% O ₂ > 1% O ₂	20% O ₂ > 1% O ₂
PC-3, 20% O ₂	N/A	Plastic > ECM	Plastic > ECM	Plastic > ECM
PC-3, 1% O ₂	N/A	Inconclusive	Plastic ≤ ECM	Plastic < ECM
PC-3 _{Bb} , 20% O ₂	ECM = HuvECM	Inconclusive	ECM < HuvECM	ECM ≤ HuvECM
PC-3 _{Bb} , 1% O ₂	ECM < HuvECM	ECM ≥ HuvECM	ECM > HuvECM	ECM > HuvECM
HuvECM	N/A	20% O ₂ > 1% O ₂	20% O ₂ = 1% O ₂	20% O ₂ ≤ 1% O ₂
HUVECs _T	N/A	20% O ₂ > 1% O ₂	20% O ₂ > 1% O ₂	20% O ₂ > 1% O ₂
HUVECs, 20% O ₂	N/A	Plastic < ECM	Inconclusive	Plastic > ECM
HUVECs, 1% O ₂	N/A	Plastic < ECM	Plastic < ECM	Plastic ≤ ECM
No. of experiments	<i>n</i> = 4	<i>n</i> = 2	<i>n</i> = 2	<i>n</i> = 1

For all experimental conditions, HUVECs expressed much higher endogenous MMP-2, MMP-9, and uPA activity per cell than PC-3 cells (data shown in Figure W1, A–C).

PC-3_{Bb}, PC-3 cells grown adherently on Biosilon beads; PC-3_T, PC-3 cells grown adherently on tissue culture plastic; HuvECM, HUVECs on ECM gel; HUVECs_T, HUVECs grown adherently on tissue culture plastic; N/A, not applicable.

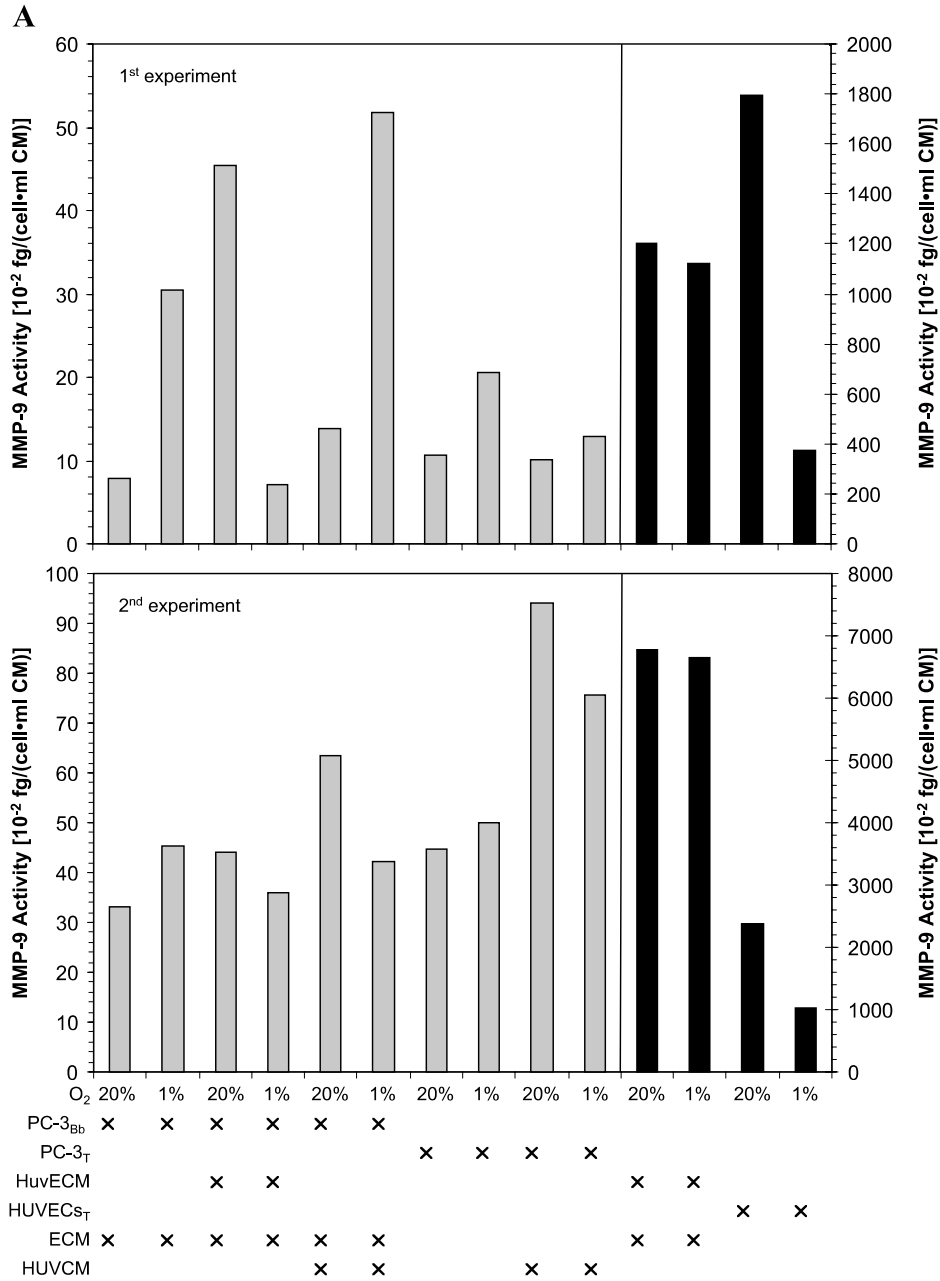


Figure W1. Endogenous (A) MMP-9, (B) MMP-2, and (C) uPA activities for PC-3 cells and HUVECs under different conditions, from two independent experiments. HUVECs expressed much higher endogenous MMP-9, MMP-2, and uPA activity per cell than PC-3 cells. PC-3_{Bb}, PC-3 cells grown adherently on Biosilon beads; PC-3_T, PC-3 cells grown adherently on tissue culture plastic; HuvECM, HUVECs on ECM gel; HUVECs_T, HUVECs grown adherently on tissue culture plastic; HUVCM, HUVEC-conditioned cell culture medium; black bars corresponding to y-axis to the right, gray bars corresponding to y-axis to the left. The cell culture medium was RPMI 1640 supplemented with 9% FBS, 90 U/ml penicillin, and 90 μg/ml streptomycin. ¹In the second experiment, the MMP-2 standard delivered not a usable standard curve to calculate the concentrations. However, the enzyme activity per cell is directly proportional to the absorbance at 405 nm per cell ($\delta Abs_{405}/cell$) still allowing the comparison of the different conditions if not absolute quantification.

B

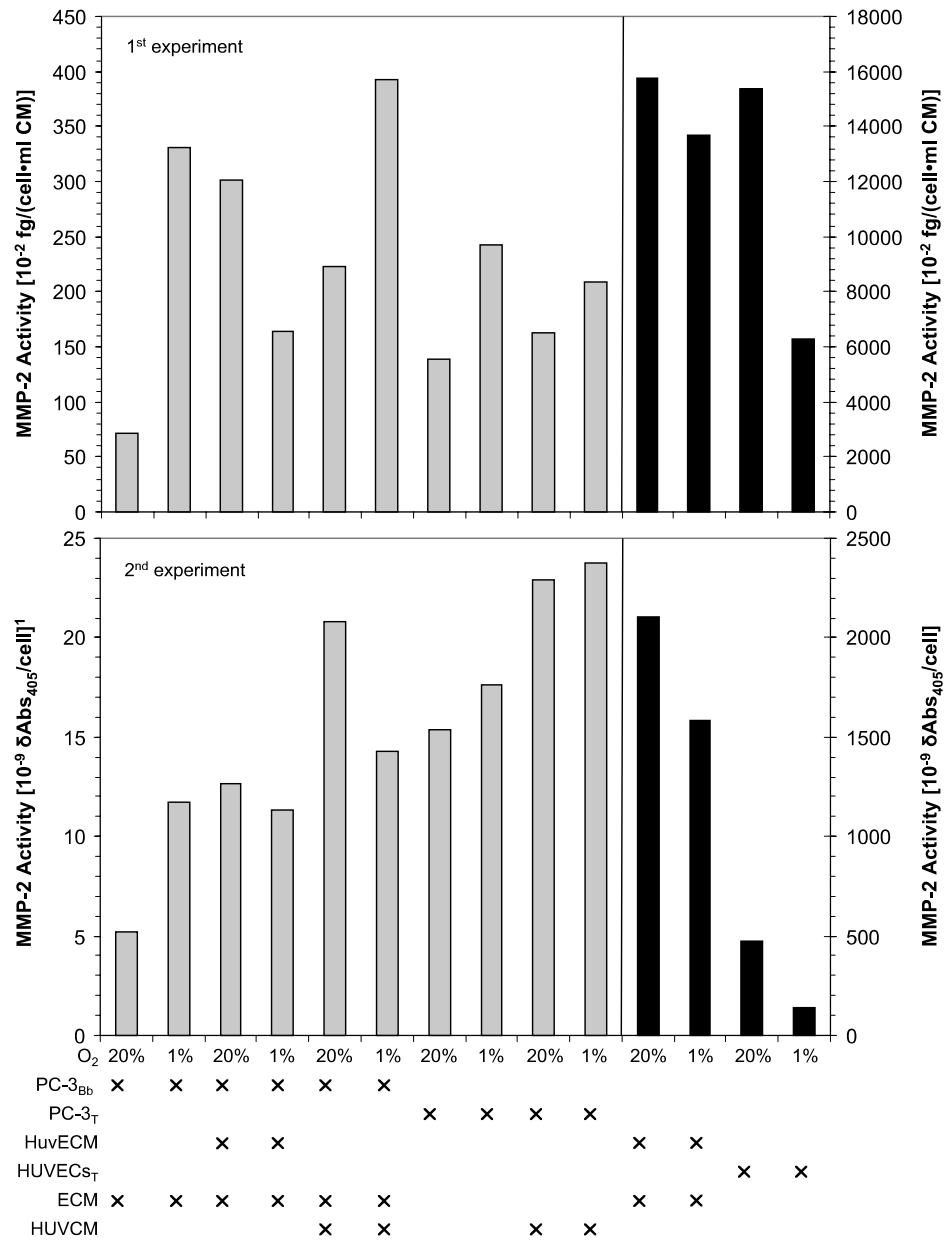


Figure W1. (continued).

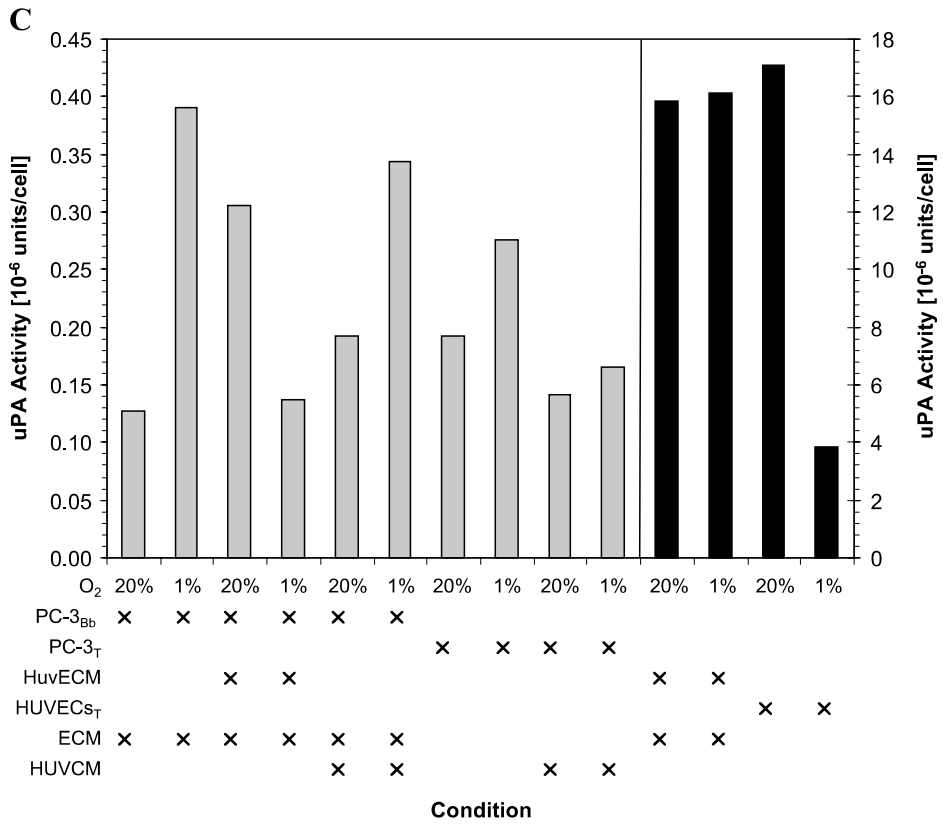


Figure W1. (continued).