

Supplementary Material

Dielectrophoretic and Electrical Impedance Differentiation of Cancerous Cells Based on Biophysical Phenotype

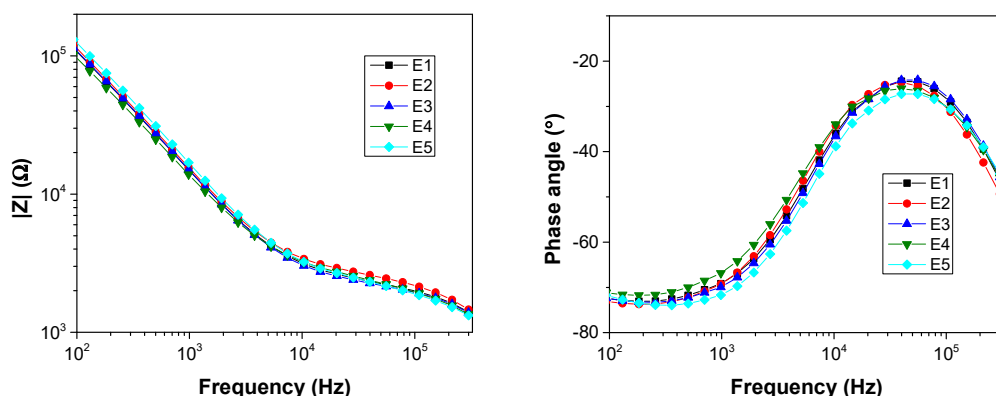


Figure S1. Microelectrodes reproducibility: Impedance magnitudes and phase angles of trapped T2 cancer cells at 9 Vpp, 1 MHz obtained for 5 independent interdigitated microelectrodes.

Table S1. Summary of reproducibility tests by EIS technique performed at the level of 5 independent interdigitated microelectrodes.

	10 ³ (Hz)			10 ⁴ (Hz)			10 ⁵ (Hz)		
	Mean value	SD	RSD (%)	Mean value	SD	RSD (%)	Mean value	SD	RSD (%)
Z (Ω)	15278.6	983.7	6.44	3196.5	121.3	3.79	1954.9	96.8	4.95
Phase angle (°)	-69.4	1.5	2.24	-35.9	1.7	4.88	-30.0	1.1	3.62

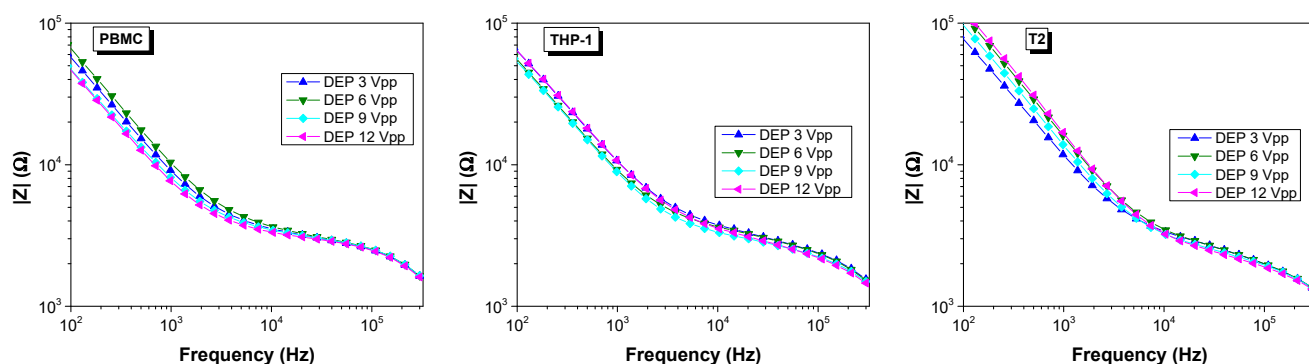


Figure S2. Impedance magnitudes of trapped PBMC, THP-1 and T2 cells at 3, 6, 9 and 12 Vpp.

Table S2. The reciprocal cell dielectric phenotype of cancer and normal blood cells.

Cell type	1/Rφ (10 ⁶ m ⁻¹)
PBMC	0.326 ± 0.016
THP-1	0.176 ± 0.007
Jurkat	0.097 ± 0.005
SW-403	0.087 ± 0.004
T1	0.089 ± 0.003
T1	0.096 ± 0.004