Supplementary Materials description

Supplement 1: Equation 1-3 demonstrate the application of GHK equation to calculate the change of membrane potential of PMN after stimulation

Equation 1: simplified GHK equation to determine calculated membrane potential of PMN

$$\text{membrane potential [mV]} = -61 \log \frac{P_K[K]_i + P_{Na}[Na]_i}{P_K[K]_e + P_{Na}[Na]_e}$$

Equation 2: change in fluorescence per change in membrane potential resulting in slope of calibration curve

$$\frac{\Delta \text{ fluorescence [AU]}}{\Delta \text{ 1 mV membrane potential}} = \frac{\text{fluorescence (K15} - \text{ K4,5)}}{\text{membrane potential (K15} - \text{ K4,5)}}$$

Equation 3: Calculation of change in membrane potential after stimulation

$$\Delta \text{ membrane potential} = \frac{\text{fluorescence (stimulant} - \text{ control)}}{\text{slope}}$$