

Figure 1. Membrane potential. Comparison between patch clamp (mV) and FLIPR Tetra System (fluorescence) assays on CHO cells expressing a voltage-gated K^+ channel.*

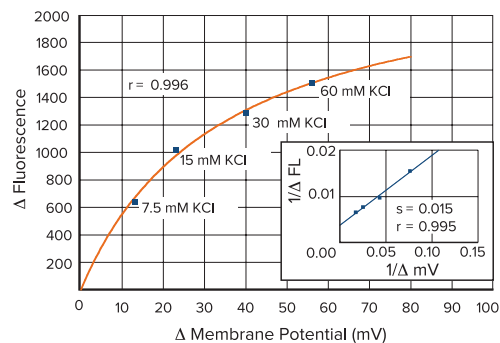


Figure 2. Membrane potential. Correlation of changes in membrane potential to fluorescence changes on a FLIPR Tetra System. CHO cells transfected with K^+ channel exposed to various K^+ concentrations.*

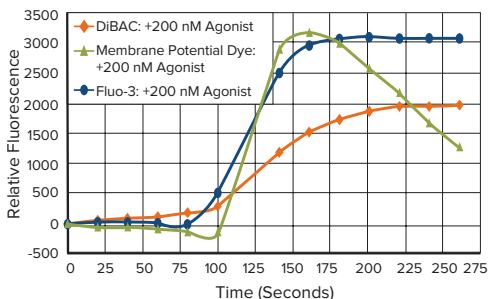


Figure 3. Membrane potential. Comparison between the FLIPR Membrane Potential Assay Kit, DiBAC and Fluo-3 assays on ligand-gated Ca^{2+} channels*.

an assay. The greatest benefit of patch clamping studies is very fast response times, allowing detection of very rapid changes in membrane potential. Comparing data generated using the FLIPR Membrane Potential Assay Kits with patch clamping results show good correlation. (See Figures 1 and 2.) Both the opening and closing of channels can now be observed. This differs from DiBAC, which very often can only show unidirectional changes in membrane potential. (See Figure 3).

Alternate formulations

Because ion channel activity is sensitive to interference, and chemical interference with a particular channel is highly unpredictable, the FLIPR Membrane Potential Assay Kits have two formulations. Both formulations combine the advantages of Molecular Devices proprietary membrane potential indicator dye with our patented quench technology. This allows the user to test the response in their ion channels cell line of interest.

We recommend that both red and blue versions be evaluated for each individual target to determine which formulation will provide optimal performance.

* Data courtesy of Michael Xie, Millennium Pharmaceuticals, Inc.

Ordering information

Item	Description	Part number
FLIPR Membrane Potential Assay Kit (Evaluation)	(5) vials Component A (blue)* (5) vials Component A (red)* (1) buffer bottle * Provides sufficient reagent for 10 plates (96-, 384-well)	R8128
FLIPR Membrane Potential Assay Kit Blue (Explorer)	(10) vials Component A (blue)* (1) buffer bottle * Provides sufficient reagent for 10 plates (96-, 384-well)	R8042
FLIPR Membrane Potential Assay Kit Red (Explorer)	(10) vials Component A (red)* (1) buffer bottle * Provides sufficient reagent for 10 plates (96-, 384-well)	R8126
FLIPR Membrane Potential Assay Kit Blue (Bulk)	(10) vials Component A (blue)* (1) buffer bottle * Provides sufficient reagent for 100 plates (96-, 384-well)	R8034
FLIPR Membrane Potential Assay Kit Red (Bulk)	(10) vials Component A (red)* (1) buffer bottle * Provides sufficient reagent for 100 plates (96-, 384-well)	R8123

Compatible with these Molecular Devices systems



FLIPR Tetra® High-Throughput Cellular Screening System



FlexStation® 3 Multi-Mode Microplate Reader

0VTUSBMB/FXFBMBOE

MFBTFDPOUBDUP4USBUFHGSPSNPSFDGPSNBUP0
PSUPSFRVFTUBRVPUF

NPMFDVMBSEFWDFTCPTUSBUFHDPNXXXCPTUSBUFHDPN