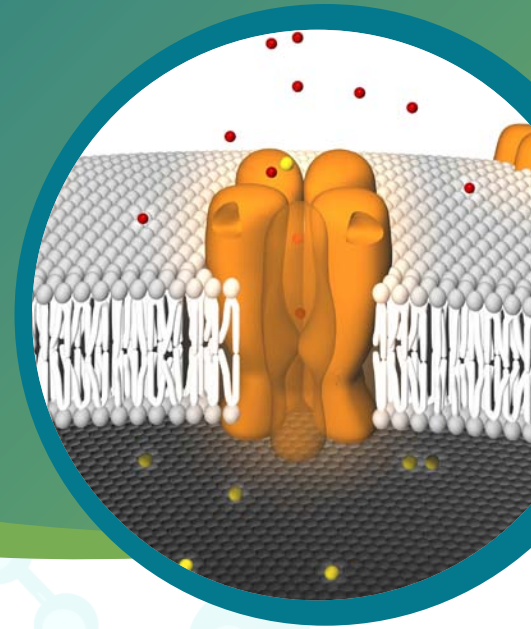


**DATA SHEET**

# FLIPR Potassium Assay Kits

The FLIPR® Potassium Assay Kit measures functional activity of ligand- and voltage-gated potassium channels. The homogeneous, no-wash assay protocol provides a large signal window and high Z' values.



The FLIPR Potassium Assay Kit exploits the permeability of thallium ions (Tl<sup>+</sup>) through both voltage- and ligand-gated potassium (K<sup>+</sup>) channels. This assay utilizes a novel, highly-sensitive Tl<sup>+</sup>-indicator dye, which produces a bright fluorescent signal upon binding to Tl<sup>+</sup> conducted through potassium channels. The intensity of the Tl<sup>+</sup> signal is proportional to the number of potassium channels in the open state; therefore, it provides a functional indication of potassium channel activity. In addition, a proprietary masking dye is employed to further reduce background fluorescence and improve signal:noise.

## Larger dynamic range

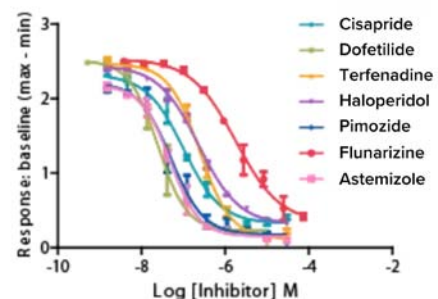
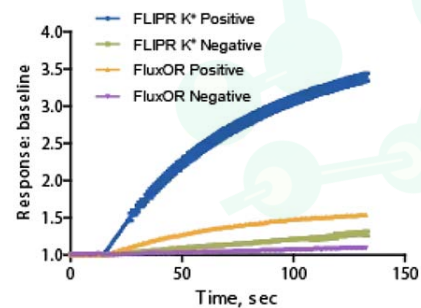
When compared to a competitor assay, the FLIPR Potassium Assay Kit provides an expanded signal window, with a more than two-fold increase in the response:baseline ratio. The negative control is 4 μM terfenadine, which blocks the hERG channel response, and the positive control is buffer, which elicits a maximal response by the hERG channel to the stimulus buffer. FLIPR Potassium Assay Kit Z' = 0.85 (n = 32); competitor Z' = 0.64 (n = 30).

## hERG channel inhibition

Seven known hERG channel blockers were evaluated using the FLIPR Potassium Assay Kit. The concentration response curves are shown.

## KEY FEATURES

- Functional measurement of potassium channel activity in a cell-based assay for drug development
- Homogenous no-wash protocol reduces well-to-well variation and simplifies the workflow
- Expanded signal-window compared to nonhomogenous assay
- Rapid procedure with less hands-on time



## Ordering information

Item	Description	Part number
5x Chloride-free Assay Buffer	<ul style="list-style-type: none"><li>• 1 bottle of 5x Chloride-free Assay Buffer Concentrate</li></ul>	#R7461
Explorer Kit – 10 Plates	<ul style="list-style-type: none"><li>• Ten (10) vials of Component A</li><li>• Ten (10) vials of Component C</li><li>• 1 Bottle of Component B</li><li>• 1 bottle of Chloride-free Assay Buffer (5X),</li><li>• 1 bottle of potassium sulfate solution (200mM)</li><li>• 1 bottle of thallium sulfate solution (50mM)</li></ul> *each pair of vials of Component A and C is sufficient for one (1) microplate (96-, 384-well)	#R8222
Bulk Kit – 100 Plates	<ul style="list-style-type: none"><li>• Ten (10) vials of Component A</li><li>• Ten (10) vials of Component C</li><li>• 1 bottle of Chloride-free Assay Buffer (5X)</li><li>• 1 bottle of potassium sulfate solution (200mM)</li><li>• 1 bottle of thallium sulfate solution (50mM)</li></ul> *each pair of vials of Component A and C is sufficient for ten (10) microplate (96-, 384-well) *Component B is not provided in this bulk kit but can be ordered separately (part number R7055)	#R8223
Evaluation Kit – 2 Plates	<ul style="list-style-type: none"><li>• Two (2) vials of Component A</li><li>• Two (2) vials of Component C</li><li>• 1 bottle of Component B</li><li>• 1 bottle of Chloride-free Assay Buffer (5X)</li><li>• 1 bottle of potassium sulfate solution (200mM)</li><li>• 1 bottle of thallium sulfate solution (50mM)</li></ul> *each pair of vials of Component A and C is sufficient for one (1) microplate (96-, 384-well),	#R8330

### Order FLIPR® Potassium Assay Kits directly

To order FLIPR® Potassium Assay Kits directly, [click here](#).

### Order FLIPR® Pipette Tips and/or FlexStation® 3 Pipette Tips directly

To order FLIPR® Pipette Tips directly, [click here](#).

To order FlexStation® Pipette Tips directly, [click here](#).



### Spectranet resources

For more information on FLIPR® Potassium Assay Kits, check out our [FLIPR® Potassium Assay Kits Guide](#), or explore our [Safety Data Sheets](#), available on Spectranet, our customer care portal.

### Compatible with these Molecular Devices systems



FLIPR® Penta High-Throughput Cellular Screening System



FlexStation® 3 Multi-Mode Microplate Reader

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Check our website for a current listing of worldwide distributors.

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