

# Potassium Ion Channel Assay Kit

**Cat. No.** Kit-2042    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

The Potassium Ion Channel kit is a no-wash cell based homogenous assay for high throughput screening measurements of potassium channel activity. Using thallium influx as a surrogate indicator of potassium ion channel activity, the assay is based on the activation of a proprietary fluorescent dye with a high affinity for thallium that reports potassium channel activity with a large fluorogenic signal which is proportional to the number of open potassium channels on the cell. The assay can be performed in a convenient 96-well or 384-well microtiter-plate format and easily adapted to automation without a separation step. Its signal can be read by a fluorescence microplate reader at Ex/Em = 488/525 nm (bottom read).

### Size

10 plates

### Description

Potassium channels are a diverse and ubiquitous family of membrane proteins present in most cell types and control a wide variety of cell functions. Potassium (K<sup>+</sup>) channels play key role in regulating such processes as heart rate, hormone secretion, neurotransmitter release, electrolyte and water balance, and cell division/proliferation. Given their physiological importance, K<sup>+</sup> channels have emerged as targets of drug discovery efforts for such indications as diabetes, epilepsy, pain, immunomodulation, arrhythmia, dementia, and others.

### Applications

Potassium channel or transporter activity.

### Storage

Keep Component A at -20°C and avoid exposure to light; Component B at 4°C, and Component C at room temperature. All components are stable for 6 months after

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receipt if stored properly.

**Kit Components**

Component A: Thallium Indicator Dye 1 vial (0.9 mg) Component B: NYPR Solution, Probenecid Substitute 1 bottle (5 ml) Component C: 10x KAB Buffer 1 bottle (10 ml)

**Detection method**

FlexStation or Microplate reader

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