

GenieHTS Ion Channel Assays

Potassium, Sodium & Calcium assays for GPCR & hERG screening



GenieHTS Potassium Ion Channel Assay

Highly Specific | Measure ion flux in potassium (K^+) channels

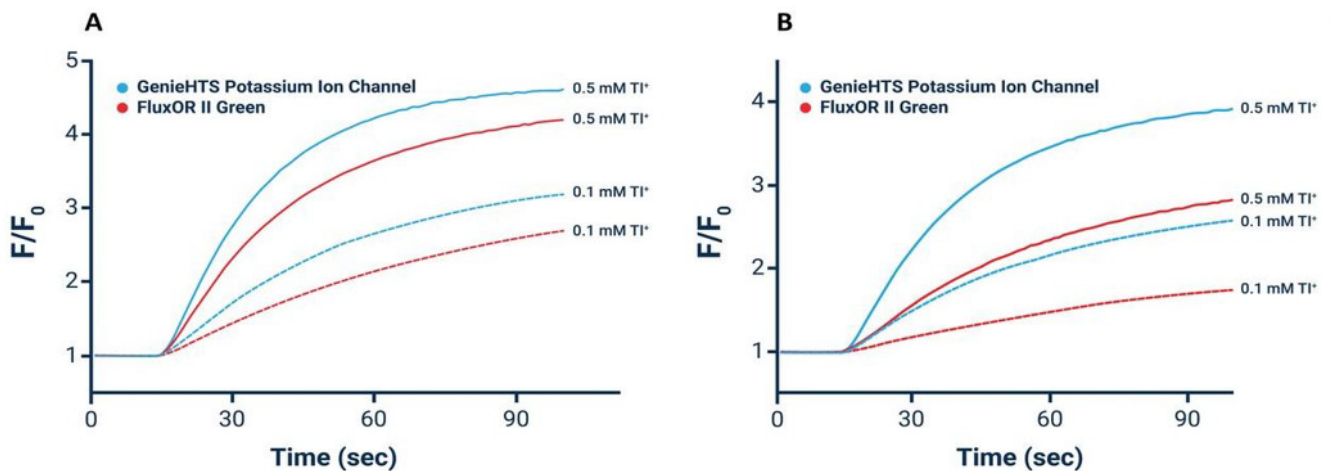
High Tech | Uses Green fluorescent thallium (Tl^+) membrane permeable indicator

HTS compatible | Wash & No-wash protocols

Relevant | Physiological data from Ion channel activators & inhibitors

Flexible | Works with both potassium (K^+), sodium (Na^+), monovalent cation channels & transporters

Assay Data



Thallium (Tl^+) Sensitivity in Wash and No-Wash Formats. HEK293 cells expressing an inward rectifying K^+ channel were tested with either Potassium Ion Channel (blue) or FluxOR II Green (red) in no-wash mode (A) or washed mode (B). Dye-loaded cells were exposed to either 0.1 mM or 0.5 mM Tl^+ .

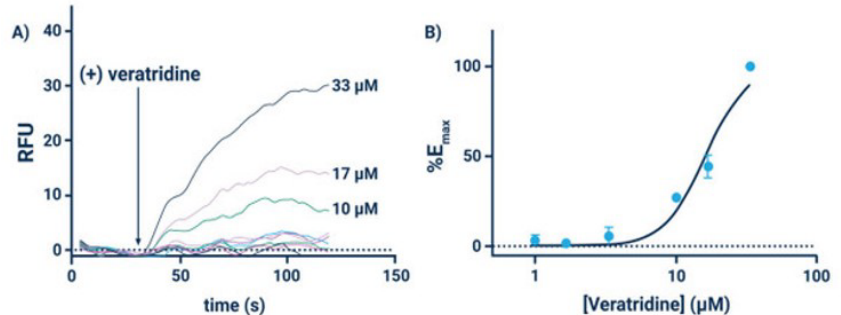
GenieHTS Sodium Ion Channel Assay

Specific | Measure changes in intracellular sodium caused by effectors of Na⁺ channels, transporters & non-selective cation channels

Unique | First HTS no-wash assay for native sodium ions

High Tech | Unique sodium indicator dye & quencher

Relevant | Physiological data from activators & inhibitors



Measuring Nav1.3 activity in HEK Nav1.3 cells. A) Baseline subtracted, kinetic fluorescence data for various veratridine (Nav channel inhibitor) concentrations. B) Veratridine concentration response curve (CRC) in engineered HEK Nav1.3 cells. EC₅₀ is 15 μM

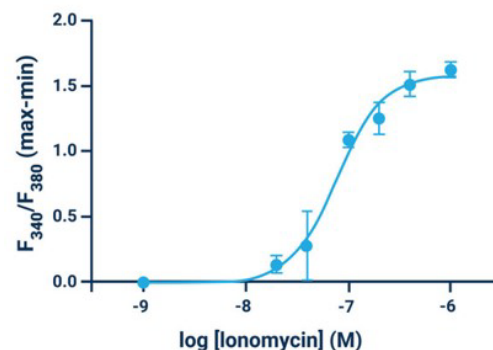
GenieHTS Calcium Flux Ratiometric Assay Kit

Specific | Measure changes in intracellular Ca²⁺ quantification & intracellular Ca²⁺ levels

Unique | No wash, ratiometric calcium flux assays

High Tech | Unique Calcium indicator dye that reduces photobleaching effects

Relevant | Physiological data from activators & inhibitors



Ionomycin was used to generate a concentration response curve in HeLa cells. Data was acquired using a Cytation 5 to calculate the ratio of F₃₄₀/F₃₈₀.

Product	Code	Pack Size
GenieHTS Potassium Ion Channel Assay kit	ASIB003	10 plates
GenieHTS Sodium Flux Assay Kit	ASIB005	10 plates
GenieHTS Calcium Flux Ratiometric Assay Kit	ASIB010	10 plates
GenieHTS Calcium Flux Assay Kit	ASIB001	10 plates