abcam

Product datasheet

Fluo-8 Calcium Assay Kit - Medium Removal ab112128

1 References 画像数 1

製品の概要

製品名	Fluo-8 Calcium Assay Kit - Medium Removal
検出方法	Fluorescent
サンプルの種類	Adherent cells, Suspension cells
アッセイタイプ	Cell-based
種交差性	**交差種:** Mammals, Other species
製品の概要	Abcam's Fluo-8 Calcium Assay Kit - Medium Removal (ab112128) is a fluorescence-based assay for detecting intracellular calcium mobilization. Cells expressing a GPCR of interest that signals through calcium are pre-loaded with Fluo-8 which can cross the cell membrane. Once inside the cell, the lipophilic blocking groups of Fluo-8 are cleaved by an esterase, resulting in a negatively charged fluorescent dye that stays inside the cell. Its fluorescence is greatly enhanced upon binding to calcium. When cells are stimulated with agonists, the receptor signals the release of intracellular calcium, which significantly increases the fluorescence of Fluo-8. The characteristics of its long wavelength, high sensitivity, and >100 times fluorescence enhancement make Fluo-8 the brightest green calcium indicator available in the marker, and it is an ideal tool for the measurement of cellular calcium through HTS screening. ab112128 provides an optimized assay method for monitoring the G-protein-coupled receptors and calcium channels using HTS instrumentation. The assay can be performed in a convenient 96-well or 384-well microtiter-plate format. **Fluo-8 products available** Fluo-8 Calcium Flux Assay Kits are available in No Wash and Medium Removal variants: - No wash kit Fluo-8 Calcium Flux Assay Kit **ab112129** is generally preferred as the workflow is simpler. It is also recommended for cell lines that are only weakly adherent and risk losing adherence when washing. - Medium removal kit Fluo-8 Calcium Flux Assay Kit ab112128 is recommended for the testing of compounds, receptors and calcium channels that are sensitive to the presence of cell culture media or serum. Alternatively, for cells that can tolerate it, consider using a low serum % in culture media and use No Wash Fluo-8 kit **ab112129**. Fluo-8 is also available as a standalone biochemical **ab142773**.

特記事項

This product is intended to be used for monitoring calcium fluctuations in vivo in live cells using the following HTS imaging plate readers: FLIPR™, FDSS, BMG NOVOstar™, FLexStation, ViewLux, IN Cell Analyzer or Arrayscan.

If you would like to quantify calcium concentration *in vitro* using cell extracts, we recommend using **Calcium Detection Kit (Colorimetric) (ab102505)** or **Calcium Quantification Assay Kit (ab112115)**, as they provide stock standards for comparison.

試験プラットフォーム

Microplate reader

製品の特性

保存方法

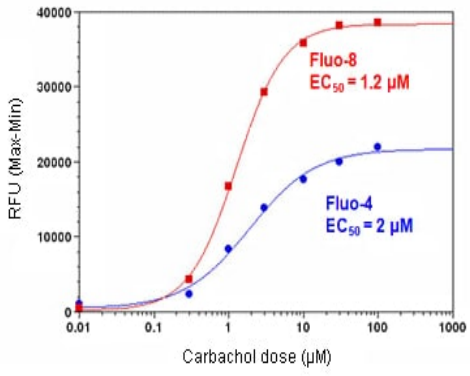
Store at -20°C. Please refer to protocols.

内容	10 x 96 tests	100 x 96 tests	1 x 96 tests
10X Pluronic® F127 Plus	10 x 1ml	10 x 10ml	1 x 1ml
Fluo-8	1 vial	10 vials	1 vial
HHBS	1 x 100ml	0 x 0ml	1 x 9ml

関連性

Calcium is essential for all living organisms, where Ca^{2+} sequestration and release into and out of the cytoplasm functions as a signal for many cellular processes. 99% of calcium is found in bones and teeth with the remaining 1% found in the blood and soft tissue. Serum calcium levels are tightly controlled (8.4-11.4 mg/dL) and any variation outside this range can have serious effects. Calcium plays a role in mediating the constriction and relaxation of blood vessels, nerve impulse transmission, muscle contraction, and hormone secretion. Calcium ion channels control the migration of calcium ions across cell membranes, permitting the activation and inhibition of a wide variety of enzymes. Causes of low calcium levels include chronic kidney failure, vitamin D deficiency, and low blood magnesium levels that can occur in severe alcoholism.

画像



Functional Studies - Fluo-8 Medium Removal Calcium Assay kit (ab112128)

Carbachol Dose Response was measured in HEK293 cells with ab112128 and a Fluo-4 assay kit. HEK293 cells were seeded overnight at 40,000 cells/100 µL/well in a black wall/clear bottom 96-well plate. The growth medium was removed, and the cells were incubated with 100 µL of dye-loading solution using ab112128 or the Fluo-4 kit for 1 hour at room temperature. Carbachol (25 µL/well) was added to achieve the final indicated concentrations. The EC_{50} of ab112128 is about 1.2 µM.

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