Product datasheet

Fluo-8 AM ab142773

Overview

Product name
Fluo-8 AM

Description
Medium affinity green fluorescent calcium binding dye. Cell-permeable.

Biological description
Medium affinity green fluorescent calcium binding dye. Binds to intracellular calcium ($K_d = 390$ nM). Fluorescence intensity increases upon Ca$^{2+}$ binding. Cell-permeable.

Fluo-8 (or Fluo-2 Medium Affinity) has been found to be brighter (1.5x) than Fluo-4 in cellular experiments. It offers improved cell loading and Ca$^{2+}$ response while maintaining the convenient Fluo-3 and Fluo-4 spectral wavelength of maximum excitation at 490 nm and maximum emission at 520 nm. Fluo-8 loading can be performed at room temperature.

Properties

Excitation
490nm

Emission
520nm

Chemical name
Bis(acetoxymethyl) 2,2'-(4-(6-(acetoxymethoxy)-3-oxo-3H-xanthen-9-yl)-2-(2-(bis(2-acetoxymethoxy)-2-oxoethyl)amino)phenoxy)ethoxy)phenyl)azanediyl)diacetate

Molecular weight
1046.94

Chemical structure

Molecular formula
$C_{50}H_{50}N_2O_{23}$

CAS Number
1345980-40-6

Storage instructions
Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview

Soluble in DMSO

Handling

Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

For more information on AM esters please visit our AM esters FAQ page.

Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.

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Source

Synthetic

Images

U2OS cells were seeded overnight at 40,000 cells per 100 μL per well in a 96-well black wall/clear bottom costar plate. The growth medium was removed, and the cells were incubated with 100 μl of 4 μM Fluo-4 AM or Fluo-8® AM in HHBS at 37 °C, 5% CO₂ incubator for 1 hour. The cells were washed twice with 200 μl HHBS, then imaged with a fluorescence microscope using FITC channel.

Fluo-8 vs Fluo-4 sensitivity to calcium release in HEK-293 cells induced by Carbachol.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE, NOT FOR USE IN HUMANS"

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