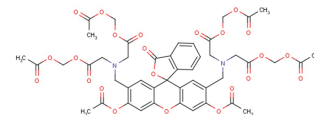


## Calcein-AM

## Chemical Properties

CAS No.:	148504-34-1
Formula:	C <sub>46</sub> H <sub>46</sub> N <sub>2</sub> O <sub>23</sub>
Molecular Weight:	994.86
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



## Biological Description

Description	Calcein-AM is a cell-permeable fluorescent dye used for the determination of cell viability.
Targets(IC <sub>50</sub> )	Others: None
In vitro	<p>The calcein-AM dye used to stain the living cells have a low spontaneous leakage rate of less than 15% in 4 hours at 37°C. Dilutions of targets stained by calcein-AM have a linear relationship with measured fluorescence values. NK cells, LAKs, and CTLs are readily detectable by this micro-test. Quantitation of killing and kinetic analysis is readily performed with the test system [1]. Calcein-AM is pH-independent, better retained, and more photostable. In addition, the high level of intracellular retention of calcein-AM and its low-level release after incorporation exclude possible cell-monolayer labeling and allow its use in a cell-cell interaction assay. Moreover, the bright fluorescence can easily be detected and measured by a microplate fluorescence reader [2]. Calcein-AM is a highly lipophilic vital dye that rapidly enters viable cells, is converted by intracellular esterases to calcein that produces an intense green (530-nm) signal, and is retained by cells with the intact plasma membrane. The calcein-AM assay has been used to assess cell viability, cytotoxicity, and to quantitate apoptosis [3].</p>

## Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.005 mL	5.026 mL	10.052 mL
5 mM	0.201 mL	1.005 mL	2.01 mL
10 mM	0.101 mL	0.503 mL	1.005 mL
50 mM	0.02 mL	0.101 mL	0.201 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Wang XM, et al. A new microcellular cytotoxicity test based on calcein-AM release. Hum Immunol. 1993 Aug;37(4):264-70.
2. Braut-Boucher F, et al. A non-isotopic, highly sensitive, fluorimetric, cell-cell adhesion microplate assay using calceinAM-labeled lymphocytes. J Immunol Methods. 1995 Jan 13;178(1):41-51.
3. Bratosin D, et al. Novel fluorescence assay using calcein-AM for the determination of human erythrocyte viability and aging. Cytometry A. 2005 Jul;66(1):78-84.

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