

SUMMARY

shipped at room temperature; store at -20 °C

CAS Number: 148504-34-1

C₄₆H₄₆N₂O₂₃, molecular weight: 994.86

Unit: 1 mg

For research use only

Chemical Name: 3',6'-Di(O-acetyl)-2',7'-bis[N,N bis(carboxymethyl)aminomethyl] fluoresceintetraacetoxymethyl ester

Appearance: white or slightly yellow crystals

Purity: > 90.0 % (HPLC)

Excitation/Emission: λ_{ex} : 490 nm, λ_{em} : 515 nm

Properties: Calcein-AM readily passes through the cell membrane of viable cells because of its enhanced hydrophobicity as compared to Calcein. After Calcein-AM permeates into the cytoplasm, it is hydrolyzed by esterases to Calcein, which remains inside the cell. Among other reagents, including BCECF-AM and Carboxy-fluorescein diacetate, Calcein-AM is the most suitable fluorescent probe for staining viable cells because of its low cytotoxicity. Calcein does not inhibit any cellular functions such as proliferation or chemotaxis of lymphocytes. In addition, viability assays using Calcein are reliable and correlate well with the standard ⁵¹Cr-release assay. The excitation and emission wavelengths of calcein are 490 nm and 515 nm, respectively.

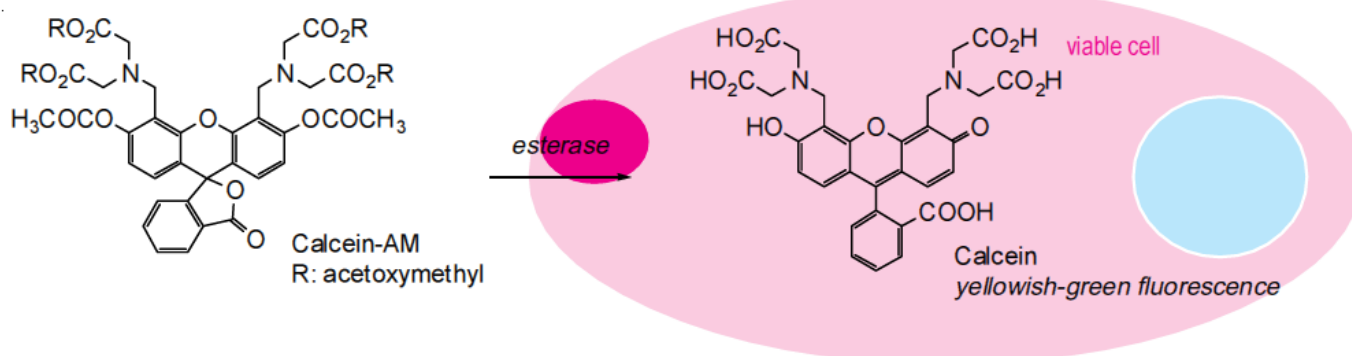
Protocol

1. Prepare 1 mM Calcein-AM solution with anhydrous DMSO. This stock solution should be stored aliquoted at -20 °C. Prior to the experiment dilute 1 - 50 μ M Calcein-AM solution with PBS.^{a)}
2. Add Calcein-AM solution with 1/10 of the volume of cell culture medium to the cell culture.^{b)}
3. Incubate the cells at 37 °C for 15 - 30 minutes.
4. Wash cells twice with PBS or an appropriate buffer.
5. Observe the cells using a fluorescence microscope with 490 nm excitation and 515 nm emission filters.

a) If the Calcein-AM loading into cells is difficult, use a detergent such as Pluronic F127.

b) Or you may replace the culture medium with 1/10 concentration of Calcein-AM buffer solution.

Mechanism of Viable Cell Staining



References

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Calcein AM Ultrapure Grade

Product Information Sheet
MFP-C430



Order Information, Shipping and Storage

Order#	Product	Quantity
MFP-C430	Calcein AM Ultrapure Grade	1 mg
shipped at room temperature; store at -20 °C		

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