eBioscience™ Calcein AM Viability Dye (UltraPure Grade)

Catalog Number: 65-0853
For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: eBioscience™ Calcein AM Viability Dye (UltraPure Grade)
Catalog Number: 65-0853
Purity: >95% as determined by HPLC.

Formulation: Lyophilized off-white solid.
Temperature Limitation: Store at -20°C. Protect from light and moisture.
Batch Code: Refer to vial
Use By: Refer to vial

Description

Calcein AM is a membrane-permeable live-cell labeling dye. Upon entering the cell, intracellular esterases cleave the acetoxymethyl (AM) ester group, yielding the membrane-impermeable Calcein fluorescent dye. Apoptotic and dead cells with compromised cell membranes do not retain Calcein. Calcein is optimally excited at 495 nm and has a peak emission of 515 nm. For fluorescent microscopy, Calcein can be detected using the appropriate filter sets. For flow cytometric analysis, it can be excited off the blue laser line (488 nm) and detected using filters for FITC/Alexa Fluor® 488 (530/30). For multicolor flow cytometry, concentrations in the range of 5 – 20 nM are recommended to ensure that compensation can be performed successfully. Co-staining with Annexin V or 7-AAD is recommended to allow the greatest resolution between live and dead/apoptotic cells. If single-color analysis is desired, improved resolution between live and dead/apoptotic cells may be obtained by using either Calcein Blue AM (cat. 65-0855) or Calcein Violet 450 AM (cat. 65-0854).

Molecular weight: 994.86
Peak excitation: 495 nm
Peak emission: 515 nm

Calcein AM should be reconstituted in high-quality, freshly opened DMSO.
Once reconstituted, it should be stored at -20°C with dessicant and used within a short period of time. Avoid freeze-thawing.

Applications Reported

Calcein AM is reported for use in flow cytometric analysis and fluorescence microscopy.

Applications Tested

Calcein AM has been tested by flow cytometric analysis of mouse thymocytes. It can be used at a concentration of 5 – 25 nM. It is highly recommended that the concentration and labeling conditions be carefully determined by each investigator for optimal performance in the assay of interest.

References

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Gatti R, Belletti S, Orlandini G, Bussolati O, Dall'Asta V, Gazzola GC. Comparison of annexin V and calcein-AM as early vital markers of apoptosis in adherent cells by confocal laser microscopy. J Histochem Cytochem. 1998 Aug;46(8):895-900.

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Related Products
00-6993 eBioscience™ 7-AAD Viability Staining Solution
65-0854 eBioscience™ Calcein Violet 450 AM Viability Dye
65-0855 eBioscience™ Calcein Blue AM Viability Dye
88-8007 eBioscience™ Annexin V Apoptosis Detection Kit APC

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14 March 2017 Rev. 10