eBioscience™ Calcein Blue AM Viability Dye

Catalog Number: 65-0855
For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: eBioscience™ Calcein Blue AM Viability Dye
Catalog Number: 65-0855
Purity: >90% based on 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 Blue 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 Blue fluorescent dye. Apoptotic and dead cells with compromised cell membranes do not retain Calcein Blue. Calcein Blue is optimally excited by the UV laser line (360 nm), but can also be excited by the violet laser line (405 nm) and has a peak emission of 445 nm that can be detected using filters for Pacific Blue®/eFluor® 450 (450/50). For fluorescent microscopy, it can be detected using the appropriate filter sets. Calcein Blue AM is itself weakly fluorescent, and an additional wash step may be necessary to reduce background fluorescence. Co-staining with Annexin V or 7-AAD is recommended to allow the greatest resolution between live and dead/apoptotic cells.

Molecular weight: 465.41
Peak excitation: 360 nm
Peak emission: 445 nm

Calcein Blue 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 Blue AM has been reported for use in flow cytometric analysis and fluorescence microscopy.

Applications Tested

Calcein Blue AM has been tested by flow cytometric analysis of mouse thymocytes. It can be used at a concentration of 1 – 10 µM. 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

Prowse AB, Wilson J, Osborne GW, Gray PP, Wolvetang EJ. Multiplexed staining of live human embryonic stem cells for flow cytometric analysis of pluripotency markers. Stem Cells Dev. 2009 Apr 27.

Sisto M, D'Amore M, Lofrumento DD, Scagliusi P, D'Amore S, Mitolo V, Lisi S. Fibulin-6 expression and anoikis in human salivary gland epithelial cells: implications in Sjogren's syndrome. Int Immunol. 2009 Mar;21(3):303-11.

Fuchs TA, Abed U, Goosmann C, Hurwitz R, Schulze I, Wahn V, Weinrauch Y, Brinkmann V, Zychlinsky A. Novel cell death program leads to neutrophil extracellular traps. J Cell Biol. 2007 Jan 15;176(2):231-41.

Morley N, Rapp A, Dittmar H, Salter L, Gould D, Greulich KO, Curnow A. UVA-induced apoptosis studied by the new apo/necro-Comet-assay which distinguishes viable, apoptotic and necrotic cells. Mutagenesis. 2006 Mar;21(2):105-14.

Related Products

00-6993 eBioscience™ 7-AAD Viability Staining Solution

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14 March 2017 Rev. 10

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65-0853 eBioscience™ Calcein AM Viability Dye (UltraPure Grade)
65-0854 eBioscience™ Calcein Violet 450 AM Viability Dye
88-8007 eBioscience™ Annexin V Apoptosis Detection Kit APC

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14 March 2017 Rev. 10