

Calcein-AM/PI Double Staining Kit

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CATALOG #
AAA178139

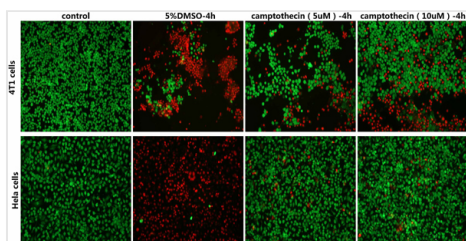
PRODUCT SYNONYMS

Calcein-AM/PI Double; Calcein-AM/PI Double Staining Kit; Calcein-AM/PI Double staining kit

PRODUCT SPECIFICATIONS

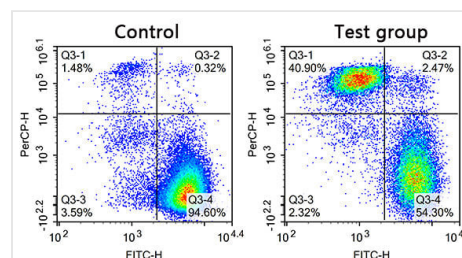
Form/Format	PBS (pH7.2~7.6)(E-IR-R187).
Samples	Cell samples
Detection Instrument	Flow Cytometry, Fluorescence Microscope
Dye Type	Calcein/PI
Channel Set	FITC, PE/PerCP/Cy5.5
Filter Set	FITC, TRITC
Detection Principle	Calcein AM/PI Double Staining Kit can be used to distinguish dead cells and living cells in mammals with esterase activity. Calcein AM is the addition of acetyl methoxy methyl ester (AM) group to traditional Calcein, which increases hydrophobicity and can easily penetrate the living cell membrane and enter the cell. Calcein AM itself has no fluorescence. After entering the cell, it is hydrolyzed by endogenous esterase in the cell to produce Calcein, a polar molecule with strong negative charge and cannot be retained in the cell through the cell membrane, while Calcein can emit strong green fluorescence (Ex / Em = 494nm / 517nm). Due to the lack of esterase, dead cells cannot or rarely produce Calcein, so only living cells are stained with strong green fluorescence, and dead cells cannot be stained or stained very weakly. The selective membrane permeability of dead cells is lost, and Propidium Iodide (PI) can enter the cell to specifically bind to double-stranded DNA and produce strong red fluorescence(Ex/Em = 535nm/617nm) to label dead cells. Therefore, the combination of Calcein AM and PI can perform double fluorescence staining on living cells and dead cells at the same time, which can be used for the detection of cell activity and cytotoxicity.
Preparation and Storage	Store at -20 degree C, shading light Estimated Expiration: 12 months Shipping: Ice bag

IMAGES



Application Data

4T1 cells and Hela cells were treated with 5 % DMSO, 5uM Camptothecin, 10uM Camptothecin for 4h, then stained with Calcein-AM / PI Double Staining Kit and photographed.



Application Data

Jurkat cells were placed at 4 degree C for 20 days, then stained with Calcein-AM / PI Double Staining Kit and detected by flow cytometry.

ADDITIONAL INFORMATION

Related Product Information for Calcein-AM/PI Double staining kit	Background: Calcein AM/PI Double Staining Kit can be used to distinguish dead cells and living cells in mammals with esterase activity. Calcein AM is the addition of acetyl methoxy methyl ester (AM) group to traditional Calcein, which increases hydrophobicity and can easily penetrate the living cell membrane and enter the cell. Calcein AM itself has no fluorescence. After entering the cell, it is hydrolyzed by endogenous esterase in the cell to produce Calcein, a polar molecule with strong negative charge and cannot pass through the cell membrane, while Calcein can emit strong green fluorescence (Ex/Em = 494nm/517nm). Due to the lack of esterase, dead cells cannot or rarely produce Calcein, so only living cells are stained with strong green fluorescence, and dead cells cannot be stained or stained very weakly. The selective membrane permeability of dead cells is lost, and Propidium Iodide (PI) can enter the cell to specifically bind to double-stranded DNA and produce strong red fluorescence(Ex/Em = 535nm/617nm) to label dead cells. Therefore, the combination of Calcein AM and PI can perform double fluorescence staining on living cells and dead cells at the same time, which can be used for the detection of cell activity and cytotoxicity.
Product Categories/Family for Calcein-AM/PI Double staining kit	Cell Apoptosis

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/staining-kits/calcein-am-pi-double/178139>