

ca²⁺ fluorescent (fluo-3) Probe

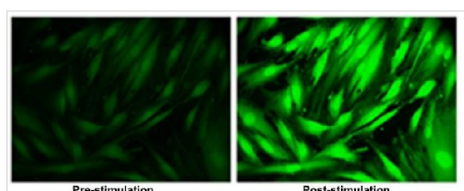
ca²⁺ fluorescent probe (fluo-3)

CATALOG #
AAA269816

PRODUCT SYNONYMS

ca²⁺ fluorescent (fluo-3); ca²⁺ fluorescent probe (fluo-3); ca²⁺ fluorescent (fluo-3) probe

IMAGES



Application Data

Figure 1. U2OS cells before and after drug treatment, imaging after incubation with Fluo-4 fluorescent probe (fluorescence microscope FITC filter)

Property	Fluo-2	Fluo-3	Fluo-4
K _d (Ca ²⁺)	390 nm	325 nm	345 nm
Excitation	494 nm	506 nm	494 nm
Emission	515 nm	526 nm	506 nm

Application Data

The Fluo-series shows enhanced fluorescence upon binding to Ca²⁺, unlike the UV-excited probes fura-2 and indo-1, and does not undergo spectral drift. The fluorescence optical density was enhanced at least 100-fold after binding to Ca²⁺. The spectral properties of Fluo-2, Fluo-3, and Fluo-4 are shown in following Table.

ADDITIONAL INFORMATION

Related Product Information for ca²⁺ fluorescent (fluo-3) probe

This probe is suitable for detecting the intracellular calcium ion concentration (Ca²⁺+Flow) change, is also often used in 96 or 384 wells GPCR high throughput drug screening.

Calcium ion Ca²⁺ indicated fluorescent probe Fluo series with Ca²⁺ in combination with the fluorescence enhancement, it is mainly used to detect all aspects of calcium ion signaling pathway, namely calcium flow, such as pharmacological screening at the cellular level, second messenger, neurotransmitter, photoactivation of chelator, etc.

Fluo-2 was one of the first Fluo series of calcium ion indicators invented by Dr. Roger Tsien. Fluo-2 is brighter in cells than Fluo-3 and Fluo-4, mainly probably due to the higher capacity of most cells to load Fluo-2 than Fluo-3 and Fluo-4. Therefore, Fluo-2 is often used for intracellular calcium ion imaging. Fluo-3 is often used on flow cytometry analysis because it can be excited by an argon ion laser 488nm and after binding with Ca²⁺, a very bright fluorescent signal is emitted.

Fluo-4 is an analogue of Fluo-3 replacing chlorine atoms with two fluorine atoms. This small structural change enhances the fluorescence signal of Fluo-4 probe at 488nm excitation light. The signal is stable and can be applied to confocal microscopy, flow cytometer, fluorescence luminometer / plate reader.

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://www.aaabiotech.com/probe/ca2-fluorescent-fluo-3/269816>