
Fura-2 AM, green fluorescent calcium indicator

<http://hk.lumiprobe.com/p/fura-2-am>

Fura-2 AM is a classic ratiometric fluorescent indicator for calcium ions, used to monitor intracellular Ca^{2+} concentrations in living cells. Thanks to its AM-ester form, the dye readily permeates the cell membrane and, following hydrolysis by intracellular esterases, is retained within the cytoplasm. Fura-2 is characterized by a shift in its excitation spectrum upon binding calcium and is typically measured in a 340/380 nm ratiometric mode, with emission occurring at approximately 510 nm. This dye enables quantitative analysis of calcium signals and corrects for artifacts associated with non-uniform dye loading, cell thickness, and photobleaching.

Compared to [Fluo-4 AM](#), Fura-2 AM provides more accurate and reproducible measurements of basal calcium levels and slow changes in Ca^{2+} concentration, thanks to its ratiometric approach. Conversely, Fluo-4 AM exhibits significantly higher brightness and is compatible with the standard 488 nm lasers found in confocal microscopes, making it the preferred choice for detecting rapid calcium transients and for high-throughput screening. Fura-2 AM is more frequently used in applications where quantitative determination of calcium concentration is critical, whereas Fluo-4 AM is better suited for highly sensitive visualization of dynamic signals.

外观:

分子量: 1001.86

CAS 编号: 108964-32-5

分子式: $\text{C}_{44}\text{H}_{47}\text{N}_3\text{O}_{24}$

溶解度:

质量控制: NMR ^1H 和 HPLC-MS (95+%)

储存条件: 收到後可在 -20°C 黑暗條件下保存24個月。運輸: 室溫下可保存長達3週。乾燥保存。

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