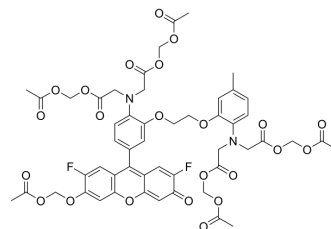


Fluo-4 AM

Cat. No.:	HY-101896
CAS No.:	273221-67-3
Molecular Formula:	C ₅₁ H ₅₀ F ₂ N ₂ O ₂₃
Molecular Weight:	1096.94
Target:	Fluorescent Dye
Pathway:	Others
Storage:	-20°C, sealed storage, away from moisture and light * The compound is unstable in solutions, freshly prepared is recommended.



BIOLOGICAL ACTIVITY

Description	Fluo-4 AM is a cell-permeable Ca ²⁺ indicator ^[1] .
In Vitro	<p>Fluo-4 AM is a fluorescent dye (λ_{ex}=494 nm, λ_{em}=516 nm). Preloaded with Fluo-4 AM, a very bright fluorescence image is observed. In a parallel experiment with Fluo-3 AM-loaded cells, the resulting fluorescence image, although clearly discernible in this case, is less bright^[1].?Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).</p> <p>?1.?Count the cells and take 106 cells from each sample (control and experiment/s).</p> <p>?2.?Collect the cells (5 min, 3000×g, 4 °C) and wash once in PBS.</p> <p>?3.?Resuspend the cells in 0.5-ml PBS and add 0.5 µl of Fluo-4-AM (1 mM stock) to a final concentration of 1 µM. Incubate at 37 °C for 1 h.</p> <p>?4.?Wash the cells three times (2 min, 3000×g) with PBS and finally resuspend in 1-ml PBS. Separate into 2 flow cytometry tubes—0.5 ml in each.</p> <p>?5.?Evaluate the staining by flow cytometry and analyze the data by a software such as CellQuest software.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

PROTOCOL

Cell Assay ^[1]	<p>For measuring fluorescence from cells in suspension, dilutions to 2 to 3×10⁶ cells are made, from cultures of rat basophilic leukemia (RBL) cells. Cells are incubated in suspension in 1 µM dye (including Fluo-4 AM) for 30 min at 37°C. Cell suspensions are then transferred to cuvetts for measurements of fluorescence emission intensity by spectrofluorometer^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
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CUSTOMER VALIDATION

- Bioact Mater. 2022 May 21;20:81-92.
- ISME J. 2023 Nov 10.
- J Adv Res. 2023 Sep 13;S2090-1232(23)00257-6.
- Nano Res. 2022;15(10):9286-9297.

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- Acta Biomater. 2023 Apr 20;S1742-7061(23)00219-2.

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REFERENCES

[1]. Gee KR, et al. Chemical and physiological characterization of fluo-4 Ca(2+)-indicator dyes. Cell Calcium. 2000 Feb;27(2):97-106.

[2]. Fluo-4.

Caution: Product has not been fully validated for medical applications. For research use only.

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