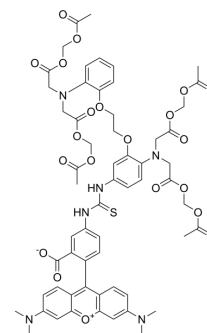


Calcium Orange AM

Cat. No.:	HY-D1629
CAS No.:	172646-19-4
Molecular Formula:	C ₅₉ H ₆₂ N ₆ O ₂₁ S
Molecular Weight:	1223.22
Target:	Fluorescent Dye
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Calcium Orange AM is an intracellular calcium reporter. Specific fluorescence can be detected when free calcium binds to Calcium Orange AM (Ex/Em=549/576 nm). Calcium Orange AM does not enter the vacuoles and does not compartmentalize into acidic vesicles ^[1] .
In Vitro	<p>Guidelines^[2] (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).</p> <ol style="list-style-type: none"> 1. Calcium Orange AM is freshly prepared in dehydrated DMSO before each experiment. 2. Prepare the recording medium for measuring [Ca²⁺]_i in cells consisted of 20 mM HEPES, 115 mM NaCl, 5.4 mM KCl, 0.8 mM MgCl₂, 1.8 mM CaCl₂, and 13.8 mM D-glucose adjusted to pH 7.4 by adding 1 M KOH. 3. Exchange the culture medium for 1 mL of a recording medium including 10 μM Calcium Orange AM. 4. Incubate cells under conditions of 5% CO₂ and 37°C for 40 min. 5. Remove the recording medium, including calcium orange AM from the dish, and add the culture medium after washing it three times with 1 mL of the recording medium. 6. Incubate the cells for 1 h. After incubation, exchange the culture medium for the recording medium again. 7. Detect fluorescence. <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Lam CM, et al. Monitoring cytosolic calcium in the dinoflagellate *Cryptocodinium cohnii* with calcium orange-AM. *Plant Cell Physiol.* 2005 Jun;46(6):1021-7.
- [2]. Inami W, et al. Intracellular calcium ion concentration measurement using a phase-modulation fluorescence lifetime method with compensation for phase shift due to the presence of proteins. *Anal Sci.* 2013;29(2):199-203.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA