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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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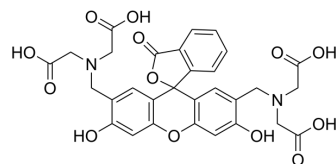
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Calcein

Cat. No.:	HY-D0040
CAS No.:	1461-15-0
Molecular Formula:	C ₃₀ H ₂₆ N ₂ O ₁₃
Molecular Weight:	623
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

1M NaOH : 50 mg/mL (80.26 mM; Need ultrasonic)
 0.1 M NaOH : 10 mg/mL (16.05 mM; ultrasonic and adjust pH to 11 with NaOH)
 DMSO : 5 mg/mL (8.03 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		1.6051 mL	8.0257 mL	16.0514 mL
	5 mM		0.3210 mL	1.6051 mL	3.2103 mL
	10 mM		0.1605 mL	0.8026 mL	1.6051 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 2% NaHCO₃ in ddH₂O
Solubility: 20 mg/mL (32.10 mM); Clear solution; Need ultrasonic and adjust pH to 6 with NaHCO₃
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 0.5 mg/mL (0.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Calcein is a fluorescent dye and self-quenching probe, used as an indicator of lipid vesicle leakage, and also as a complexometric indicator for titration of calcium ions with EDTA, and for fluorometric determination of calcium.

In Vitro

Calcein accumulates intracellularly in coelomocytes incubated in coelomic fluid or ISO-EDTA. Coelomocytes incubated in CF show an increase in the calcein fluorescence intensity compared to the control.
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

Coelomocytes suspensions (ISO and CF) are separately incubated with calcein-AM (excitation and emission wavelength: 496 nm and 516 nm, respectively) at a final concentration of 200 nM, during 30 min, at 26°C. Calcein-AM is a nonfluorescent ABC transporter substrate whose intracellular accumulation is inversely proportional to ABC transporter activity. Intracellular esterases convert calcein-AM into the fluorescent dye calcein, which is not an ABC transporter substrate, thereby accumulating the dye inside the cell. Therefore, a high fluorescence signal indicates low ABC transporter activity whereas a low fluorescence signal indicates high activity. The fluorescence of samples is measured by flow cytometer. The experiment is repeated six times in duplicates.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Adv Mater. 2023 Jun;35(23):e2300548.
- Antioxidants (Basel). 2021 May 18;10(5):798.
- Drug Des Devel Ther. 2022, 16: 3929-3946.
- Int J Adv Manuf Technol. 17 January 2022.

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REFERENCES

[1]. Marques-Santos LF, et al. ABCB1 and ABCC1-like transporters in immune system cells from sea urchins Echinometra lucunter and Echinus esculentus and oysters Crassostrea gasar and Crassostrea gigas. Fish Shellfish Immunol. 2017 Sep 5;70:195-203.

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

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