

Product Data Sheet

Product Name: Calcein(AR)

Cat. No.: GC62882

Chemical Properties

Cas. No. 1461-15-0

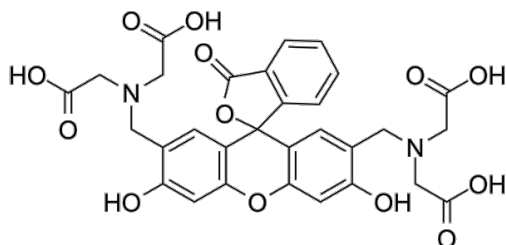
Formula $C_{30}H_{26}N_2O_{13}$ M.Wt 622.53

Solubility DMSO : ≥ 100 mg/mL (160.63 mM)|0.1 M NaOH : 10 mg/mL (16.06 mM; ultrasonic and adjust pH to 11 with NaOH) Storage 4°C, protect from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Protocol

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

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

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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.

[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.

Background

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.

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.

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