Erythrosine B

Cat. No.: HY-D0259

CAS No.: 16423-68-0

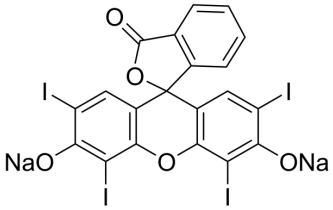
Molecular Formula: $C_{20}H_6I_4Na_2O_5$

Molecular Weight: 879.86

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 33.33 mg/mL (37.88 mM; Need ultrasonic)
DMSO : 33.33 mg/mL (37.88 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1365 mL	5.6827 mL	11.3654 mL
	5 mM	0.2273 mL	1.1365 mL	2.2731 mL
	10 mM	0.1137 mL	0.5683 mL	1.1365 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 33.33 mg/mL (37.88 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.84 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.84 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Erythrosine B is an artificial dye widely used in the food and textile industries. Erythrosine B is also a novel photosensitizer which has been used to develop animal models.

In Vitro

Only the two highest concentrations of Erythrosine B tested (50.0 and 70.0 μg/mL) are significantly different ($p<0.05$) from the vehicle control group when the Tail Moment and Tail Intensity, which represent the extent of DNA damage, are analyzed. Results show increased micronuclei (MNi) frequencies at six of the seven Erythrosine B concentrations (0.2 to 70.0 μg/mL) when compared to vehicle control group[1].

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

PROTOCOL

Cell Assay [1]

The alkaline single-cell gel electrophoresis assay (comet assay) is performed. Briefly, 2×10^5 HepG2 cells are seeded in a 24-well plate for 24 h. The cells are then treated with Erythrosine B at 0.1, 0.2, 2.0, 10.0, 25.0, 50.0 or 70.0 μg/mL (final concentration) for 4 h; vehicle control (0.7% DMSO) and positive control (doxorubicin0.3 μg/mL) treatments are also performed. The HepG2 cell suspension is mixed with 37°C low-melting point agarose and transferred to normal-melting point agarose-coated slides. One hundred randomly chosen nucleoids are analyzed per treatment, and a total of three independent experiments are performed[1].

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

REFERENCES

[1]. Chen W, et al. Establishing an experimental rat model of photodynamically-induced retinal vein occlusion using erythrosin B. Int J Ophthalmol. 2014 Apr 18;7(2):232-8.

[2]. Chequer FM, et al. Genotoxic and mutagenic effects of erythrosine B, a xanthene food dye, on HepG2 cells. Food Chem Toxicol. 2012 Oct;50(10):3447-51.

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