Rhodamine B

Cat. No.: HY-Y0016

CAS No.: 81-88-9

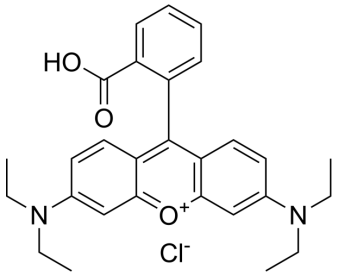
Molecular Formula: $C_{28}H_{31}ClN_2O_3$

Molecular Weight: 479.01

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 2 years; -20°C, 1 year (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (260.95 mM; Need ultrasonic)
H_2O : 100 mg/mL (208.76 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0876 mL	10.4382 mL	20.8764 mL
5 mM	0.4175 mL	2.0876 mL	4.1753 mL
10 mM	0.2088 mL	1.0438 mL	2.0876 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 5 mg/mL (10.44 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.34 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Rhodamine B is a staining fluorescent dye, commonly used for dyeing textiles, paper, soap, leather, and agents.

In Vitro

Rhodamine B induces a concentration-dependent reduction of root meristem cells of A. cepa. mitotic activity. Rhodamine B induces various nuclear aberrations in A. cepa. root cells. In the 100 and 200 ppm rhodamine B groups, the frequencies of NBUDs and BN surpass those of the positive control (MMS) group. Rhodamine B-induced changes of H_2O_2 (a) and MDA (b) level increase in a concentration-dependent manner in A. cepa. roots[1].

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

CUSTOMER VALIDATION

- Chem Eng J. 2020, 127870.
- EMBO J. 2020 Sep 15;39(18):e104365.
- Biomed J. 2023 Mar 31;S2319-4170(23)00029-X.
- ACS Omega. 2022.
- Biomed Res Int. 2022.

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REFERENCES

[1]. Tan D, et al. Rhodamine B induces long nucleoplasmic bridges and other nuclear anomalies in Allium cepa root tip cells. Environ Sci Pollut Res Int. 2014 Mar;21(5):3363-70.

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