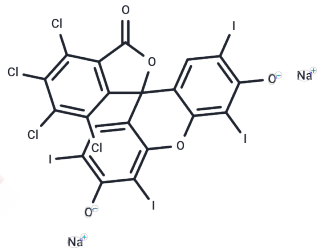
Data Sheet (Cat.No.T7651)

TargetMol

Rose Bengal sodium

Chemical Properties



CAS No. : 632-69-9

Formula: C20H2Cl4I4Na2O5

Molecular Weight: 1017.64

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Rose Bengal sodium is a potent inhibitor of VGlut and vesicular monoamine transporter (VMAT) (Ki of 19 and 64 nM for VGlut andVMAT, respectively)
Targets(IC50)	Beta Amyloid,Influenza Virus,Monoamine Transporter,Photosensitizer
In vitro	Instructions: a. Solution preparation: 1. Dissolve Rose Bengal sodium in DMSO to prepare a 10mM stock solution. Keep it away from light. Please divide the stock solution and store it at -20℃ or -80℃ to avoid repeated freezing and thawing. 2. Dilute the mother solution into a certain gradient of working solution for use. b. Operation steps: 1. Grow the bacteria to a concentration of 10^8 CFU/mL, and then dilute it tenfold with sterile saline to a concentration of 10^3-10^7 CFU/mL. 2. Transfer 3 mL of bacterial suspension to a flat-bottomed 20 mL vial with a diameter of 2.5 cm. Before the experiment, take a sample from each vial to determine the initial bacterial concentration. 3. Add different concentrations of Rose Bengal sodium to all vials except the control group. After adding Rose Bengal sodium, all subsequent operations are performed under dark conditions. 4. Place the vials of bacterial suspension with or without Rose Bengal sodium at the bottom of the ultrasound tank in a VU03H plastic holder and treat with ultrasound at a frequency of 38 kHz and an electric field strength of 4.1 W/cm^3 for 1 to 10 minutes. 5. After treatment, 100 μL of the sample was diluted tenfold and plated on a BHA plate. The plate was incubated overnight at 37°C and the bacterial cell concentration was determined using the viable count method. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.
Cell Research	Bacteria were grown to a concentration of 10^8 CFU/mL and then diluted with sterile saline by serial decimal dilutions to concentrations of 10^3-10^7 CFU/mL.?Three milliliters of bacterial suspensions was transferred into flat-bottom 2.5 cm diameter 20 mL vials.?Before the experiment, samples were taken from each vial to determine the initial bacterial concentration.?Free Rose Bengal at various concentrations or Rose

Cell Research	Bengal immobilized onto silicone was added to all vials, except for the controls.?After adding Rose Bengal, all subsequent procedures were performed under dark conditions.?Vials with bacterial suspensions with or without Rose Bengal were held tight to the bottom of an ultrasonic bath in a plastic holder VU03H ?and treated by ultrasound at a frequency of 38 kHz and a field strength of 4.1 W/cm^3 for 1 to 10 min. After the treatment, 100 µL samples were diluted by several decimal dilutions and were spread over BHA plates with a Drigalsky spreader.?The plates were incubated at 37 °C overnight and the bacterial cell concentration was determined taking dilutions into account using the viable count method, where CFU were counted by means of a colony counter Scan 500.?In control experiments, bacterial cultures were tested in the absence of Rose Bengal without sonication, in the absence of Rose Bengal under sonication and in the presence of Rose Bengal without sonication[1]. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 22.5 mg/mL (22.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9827 mL	4.9133 mL	9.8267 mL
5 mM	0.1965 mL	0.9827 mL	1.9653 mL
10 mM	0.0983 mL	0.4913 mL	0.9827 mL
50 mM	0.0197 mL	0.0983 mL	0.1965 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Pileggi G, et al. Blue light-mediated inactivation of Enterococcus faecalis in vitro. Photodiagnosis Photodyn Ther. 2013 May;10(2):134-40.

Anju V , Paramanantham P , Sruthil S L , et al. Antimicrobial photodynamic activity of rose bengal conjugated multi walled carbon nanotubes against planktonic cells and biofilm of Escherichia coli[J]. Photodiagnosis and Photodynamic Therapy, 2018.