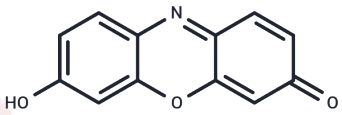
Data Sheet (Cat.No.T16734)

TargetMol

Resorufin

Chemical Properties



CAS No. : 635-78-9

Formula: C12H7NO3

Molecular Weight: 213.19

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	Resorufin (NSC-12097) (NSC-12097) is a highly fluorescent pink dye.
Targets(IC50)	Others,Reactive Oxygen Species,ROS
Cell Research	I. ROS/RNS Detection 1. Prepare solution: Dissolve Resorufin in an appropriate solvent, usually dimethyl sulfoxide (DMSO), to prepare a working solution (e.g., 1-10 μM). 2. Cell incubation: Add Resorufin to cultured cells or tissues and incubate for a set time, usually 30 minutes to 1 hour. 3. ROS/RNS generation: Use stimuli such as H2O2 or NO donors to induce ROS/RNS generation. 4. Fluorescence measurement: Use a fluorescence spectrophotometer, fluorescence microscope, or flow cytometer to measure fluorescence emission at approximately 590 nm at an excitation wavelength of approximately 530 nm. II. Cellular analysis of oxidative stress 1. Treatment: Add Resorufin to cells after exposure to potential oxidative stressors or antioxidants. 2. Measurement: Measure changes in fluorescence intensity to quantify the level of ROS/RNS in cells. III. Monitoring of mitochondrial red oxygen reduction potential 1. Mitochondrial incubation: Treat cells with mitochondrial inhibitors or other compounds and add Resorufin to track changes in red oxygen reduction. 2. Fluorescence monitoring: Measure fluorescence changes in real time to observe the dynamics of mitochondrial red oxygen reduction. IV. Analysis of other analytes: 1. Sample preparation: Prepare biological or chemical samples that may contain analytes of interest. 2. Fluorescence detection: Detect the presence and concentration of specific analytes through fluorescence monitoring. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 60 mg/mL (281.44 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.6907 mL	23.4533 mL	46.9065 mL
5 mM	0.9381 mL	4.6907 mL	9.3813 mL
10 mM	0.4691 mL	2.3453 mL	4.6907 mL
50 mM	0.0938 mL	0.4691 mL	0.9381 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

Ha TQ,et al. Preclinical activity of resazurin in acute myeloid leukaemia. Br J Haematol. 2025 Jan;206(1):109-119.
Luo L,et al. Nanozyme-Enzyme Cascade Reaction-Enhanced Ratiometric Fluorescence Immunosensing Platform for Sensitive and Accurate Detection of Ractopamine. J Agric Food Chem. 2024 Nov 27;72(47):26504-26513.
Mehlawat N, et al. Ultrafast and Ultrasensitive Bacterial Detection in Biofluids: Leveraging Resazurin as a Visible and Fluorescent Spectroscopic Marker. Anal Chem. 2024 Nov 12;96(45):18002-18010.