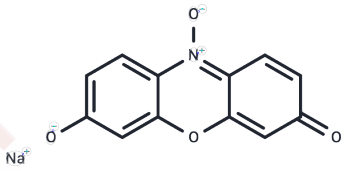
Data Sheet (Cat.No.T7650)

TargetMol

Resazurin sodium

Chemical Properties



CAS No. : 62758-13-8

Formula: C12H6NNaO4

Molecular Weight: 251.17

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	Resazurin sodium (Resazurin sodium salt) salt is a blue non-fluorescent dye,is widely used as a metabolic indicator for living cells
Targets(IC50)	Antibacterial
In vitro	Resazurin inhibits the growth of a broad range of N. gonorrhoeae isolates, including those resistant to multiple antibiotics[1]
In vivo	In vivo resazurin did not limit the colonisation of mice with N. gonorrhoeae following vaginal infection.?The ineffectiveness of resazurin in vivo is likely due to its interaction with serum albumin, which completely diminishes its antimicrobial activity[1].
Cell Research	Instructions I. Cell viability assay 1. Prepare Resazurin solution: Dissolve Resazurin sodium in saline or PBS to prepare a solution of appropriate concentration, usually 10-100 μM (optimal concentration can be adjusted according to cell type). 2. Add cells: Add Resazurin solution to cell culture medium (usually 10% of the total amount). 3. Incubate: Incubate cells with Resazurin solution for 30 minutes to 2 hours. Metabolically active cells will reduce Resazurin to Resorufin and emit fluorescence. 4. Measure fluorescence: Use a fluorescence plate reader to measure fluorescence intensity, usually at an excitation wavelength of 530-560 nm and an emission wavelength of 590 nm. The fluorescence signal is proportional to the number of viable cells. II. Microbial growth monitoring 1. Prepare Resazurin solution: Dissolve Resazurin sodium in culture medium at a concentration of 10-50 μM. 2. Add to microbial culture: Add Resazurin solution to bacterial or fungal culture. 3. Incubate: Allow microorganisms to grow under appropriate conditions and monitor the reduction of Resazurin to Resorufin. 4. Measure fluorescence: Use a fluorimeter to monitor fluorescence intensity. Increased fluorescence indicates microbial growth. III. Drug screening and toxicity testing 1. Prepare Resazurin solution: Prepare Resazurin sodium solution as described above.

Cell Research	2. Add to drug-treated cells: Add Resazurin solution to drug-treated cells or animal samples to evaluate the effects of the drug. 3. Incubate: Incubate cells according to experimental requirements. 4. Measure fluorescence: Use a fluorescence imaging system to monitor fluorescence intensity and evaluate cell activity after drug treatment. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 2.52 mg/mL (10.03 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9814 mL	19.9068 mL	39.8137 mL
5 mM	0.7963 mL	3.9814 mL	7.9627 mL
10 mM	0.3981 mL	1.9907 mL	3.9814 mL
50 mM	0.0796 mL	0.3981 mL	0.7963 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

Schmitt DM, et al. The use of resazurin as a novel antimicrobial agent against Francisella tularensis. Front Cell Infect Microbiol. 2013 Dec 6;3:93.

Wang W,et al. Boosting the zinc storage of a small-molecule organic cathode by a desalinization strategy. Chem Sci. 2023 Aug 2;14(34):9033-9040.

Lisjak D,et al. NaYF4-based upconverting nanoparticles with optimized phosphonate coatings for chemical stability and viability of human endothelial cells. Methods Appl Fluoresc. 2021 Dec 22;10(1).