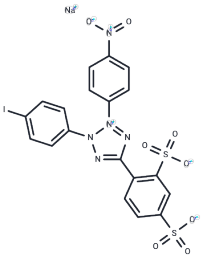
Data Sheet (Cat.No.T20067)

TargetMol

WST-1

Chemical Properties



CAS No. : 150849-52-8

Formula: C19H11IN5NaO8S2

Molecular Weight: 651.34

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	WST-1 is a cytotoxic, water-soluble tetrazolium salt that induces intracellular mitochondrial dehydrogenases to undergo NADH-dependent enzymatic reactions, releasing water-soluble methylbenzene products.WST-1 can be used to detect cell proliferation and cellular activity by assaying the uptake values, and can be used to determine superoxide dismutase activity in the WST-1 plate assay.
Targets(IC50)	Others
Cell Research	Instructions 1. Preparation of WST-1 solution: WST-1 powder is fully dissolved in DMSO to prepare a 10 mg/mL WST-1 stock solution. The prepared solution should be stored away from light, can be stored at 4℃ for one week, and can be stored at -20℃ for half a year, and avoid repeated freezing and thawing. 2. Cell inoculation: According to the purpose of the experiment, add an appropriate amount of cell suspension to a 96-well plate and culture overnight to ensure cell adhesion. Treat cells: According to the needs of the experiment, add different concentrations of the drug or stimulant to be tested to each well and continue to culture for an appropriate time. 3. Add WST-1 reagent: Add 5-10 μM WST-1 working solution to each well and mix gently. 4. Incubation: Place the culture plate in a cell culture incubator and incubate for 0.5 to 4 hours. The specific incubation time can be optimized according to the cell type and density, usually 1-2 hours. 5. Determine absorbance: Use a microplate reader to measure the absorbance of each well at a wavelength of 450nm and calibrate it with a reference wavelength of 600nm. The level of absorbance reflects the proliferation or survival of cells. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 80 mg/mL (122.82 mM),Sonication is recommended. DMSO: 250 mg/mL (383.82 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2.5 mg/mL (3.84 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5353 mL	7.6765 mL	15.353 mL
5 mM	0.3071 mL	1.5353 mL	3.0706 mL
10 mM	0.1535 mL	0.7676 mL	1.5353 mL
50 mM	0.0307 mL	0.1535 mL	0.3071 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

Sarı, A Comparative Study of MTT and WST-1 Assays in Cytotoxicity Analysis / doi: 10.14744/hnhj.2019.16443
Yin LM,et al. Simultaneous application of BrdU and WST-1 measurements for detection of the proliferation and viability of airway smooth muscle cells. Biol Res. 2014 Dec 22;47(1):75.
Watermann P, Dringen R. β-lapachone-mediated WST1 Reduction as Indicator for the Cytosolic Redox Metabolism of Cultured Primary Astrocytes. Neurochem Res. 2023 Jul;48(7):2148-2160.
Winkler C, et al. The bacterial adhesion on and the cytotoxicity of various dental cements used for implant-supported fixed restorations. Acta Odontol Scand. 2014 May;72(4):241-50.