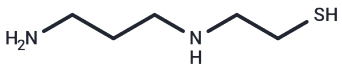
Data Sheet (Cat.No.T37538)

TargetMol

Amifostine thiol

Chemical Properties



CAS No. : 31098-42-7

Formula: C5H14N2S

Molecular Weight: 134.24

Storage: Keep away from direct sunlight,Store at low temperature,Store under nitrogen
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	Amifostine thiol (WR-1065) is a radioprotectant that protects DNA from fast neutron-induced strand breaks.Amifostine thiol ameliorates (P<0.001) 6-OHDA-induced stiffness in a dose-dependent manner and activates p53 through a JNK-dependent signaling pathway.
Targets(IC50)	Mdm2,p53,MDM-2/p53
In vitro	4 mM Amifostine thiol exhibits a protective effect against the genome instability induced by 30 minutes of X-ray irradiation, and also protects RKO36 cells from chromosomal damage and death caused by ionizing radiation[1].

Solubility Information

Solubility	H2O: 50 mg/mL (372.47 mM),Sonication is recommended. DMSO: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.4493 mL	37.2467 mL	74.4934 mL
5 mM	1.4899 mL	7.4493 mL	14.8987 mL
10 mM	0.7449 mL	3.7247 mL	7.4493 mL
50 mM	0.149 mL	0.7449 mL	1.4899 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

Jaroslaw Dziegielewski, et al. WR-1065, the Active Metabolite of Amifostine, Mitigates Radiation-Induced Delayed Genomic Instability. Free Radic Biol Med. 2008 Dec 15; 45(12): 1674-1681.

Olivier Pluquet, et al. The cytoprotective aminothiol WR1065 activates p53 through a non-genotoxic signaling pathway involving c-Jun N-terminal kinase. J Biol Chem. 2003 Apr 4;278(14):11879-87. J Biol Chem. 2003 Apr 4;278 (14):11879-87.

J. S. Murley, et al. WR-1065, an active metabolite of the cytoprotector amifostine, affects phosphorylation of topoisomerase IIα leading to changes in enzyme activity and cell cycle progression in CHO AA8 cells. Cell Prolif. 1997 Jun; 30(6): 283-294.