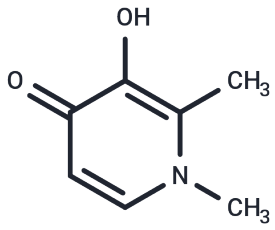
Data Sheet (Cat.No.T1565)

TargetMol

Deferiprone

Chemical Properties



CAS No. : 30652-11-0

Formula: C7H9NO2

Molecular Weight: 139.15

Storage: Keep away from moisture
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	Deferiprone (Deferidone) is an Iron Chelator. The mechanism of action of deferiprone is as an Iron Chelating Activity.
Targets(IC50)	Apoptosis,HCV Protease,Ferroptosis,COX,UGT
In vitro	At a concentration of 1 mM, Deferiprone causes a significant decrease in complex I-III activity in iron-overloaded cardiomyocytes. It exhibits cytotoxic effects on human tumor cell lines HSC-2, HSC-3, and HL-60, with IC50 values of 13.5 μg/mL, 9.9 μg/mL, and 10.6 μg/mL, respectively. The cytotoxicity of HK1 against HL-60 and HSC-2 cells is reduced in the presence of FeCl3. At 100 μg/mL, Deferiprone induces inter-nucleosomal DNA fragmentation in HL-60 cells, a process inhibited by the addition of FeCl3. Protection of myocytes from doxorubicin-induced lactate dehydrogenase release is observed with 100 μM Deferiprone. It effectively inhibits the transfer of radiolabeled iron from iron-loaded cardiomyocytes and protects or restores mitochondrial respiratory enzyme activity in a xanthine oxidase/hypoxanthine superoxide generating system at a concentration of 0.3 mM. Furthermore, 0.5 mM Deferiprone enhances the clearance of free iron from RBC membranes in a time- and dose-dependent manner. A 3 mM concentration significantly reduces hydroxyl radical production from the iron(III)-adriamycin complex in the xanthine oxidase/hypoxanthine superoxide generating system.
In vivo	Administration of 100 mg/kg Deferiprone resulted in a 24% reduction in the average cross-sectional area of the basilar artery in rabbits. When combined with subarachnoid hemorrhage (SAH), Deferiprone also demonstrated variability in the waviness of the internal elastic lamina in rabbits.

Solubility Information

Solubility	DMSO: 2.17 mg/mL (15.59 mM),Sonication is recommended. H2O: 8.06 mg/mL (57.92 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.1865 mL	35.9324 mL	71.8649 mL
5 mM	1.4373 mL	7.1865 mL	14.373 mL
10 mM	0.7186 mL	3.5932 mL	7.1865 mL
50 mM	0.1437 mL	0.7186 mL	1.4373 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

Barnabé N, et al. Free Radic Biol Med, 2002, 33(2), 266-275.
Deng F, Xu G, Cheng Z, et al. Hepatitis B Surface Antigen Suppresses the Activation of Nuclear Factor Kappa B Pathway via Interaction With the TAK1-TAB2 Complex. Frontiers in Immunology. 2021, 12: 233.
Shalev O, et al. Blood, 1995, 86(5), 22008-22013.
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Link G, et al. J Lab Clin Med, 1999, 133(2), 179-188.
Yasumoto E, et al. Anticancer Res, 2004, 24(2B), 755-762.
Arthur AS, et al. Neurosurgery, 1997, 41(6), 1385-1391.
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