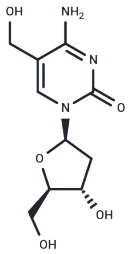
Data Sheet (Cat.No.T40834)

TargetMol

5-Hydroxymethyl-2'-deoxycytidine

Chemical Properties



CAS No. : 7226-77-9

Formula: C10H15N3O5

Molecular Weight: 257.24

Storage: 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	5-Hydroxymethyl-2'-deoxycytidine is an oxidized derivative of 5-methyl-2'-deoxycytidine (5-mdC) in DNA, causing DNA damage reactions, chromosomal aberrations, replication fork damage, and loss of cell viability.5-Hydroxymethyl-2'-deoxycytidine is an oxidized derivative of 5-methyl-2'-deoxycytidine in DNA. Hydroxymethyl-2'-deoxycytidine replication fork instability is associated with the presence of poly(ADP-ribose) polymerase 1 (PARP1) on chromatin.
Targets(IC50)	DNA/RNA Synthesis,PARP

Solubility Information

Solubility	DMSO: 45 mg/mL (174.93 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 mg/mL (7.77 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	3.8874 mL	19.4371 mL	38.8742 mL
5 mM	0.7775 mL	3.8874 mL	7.7748 mL
10 mM	0.3887 mL	1.9437 mL	3.8874 mL
50 mM	0.0777 mL	0.3887 mL	0.7775 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

Ewelina Zarakowska, et al. Oxidation Products of 5-Methylcytosine are Decreased in Senescent Cells and Tissues of Progeroid Mice. J Gerontol A Biol Sci Med Sci. 2018 Jul 9;73(8):1003-1009.
Shuo Liu, et al. Quantitative assessment of Tet-induced oxidation products of 5-methylcytosine in cellular and tissue DNA. Nucleic Acids Res. 2013 Jul;41(13):6421-9.