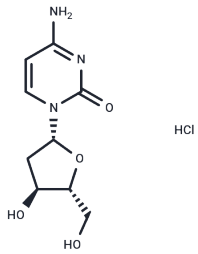
Data Sheet (Cat.No.T22494)

TargetMol

2'-Deoxycytidine hydrochloride

Chemical Properties



CAS No. : 3992-42-5

Formula: C9H14ClN3O4

Molecular Weight: 263.68

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	2'-Deoxycytidine hydrochloride is the hydrochloride form of 2'-Deoxycytidine, an important deoxyribonucleoside analog commonly used in DNA synthesis and potentially anticancer, and its derivative Gemcitabine has been developed as an anticancer drug. 2'-Deoxycytidine 2'-Deoxycytidine hydrochloride protects mice from the lethal toxicity of cytosine arabinoside(araC).
Targets(IC50)	Nucleoside Antimetabolite/Analog,Endogenous Metabolite
In vitro	**Methods**: Effects of 2'-Deoxycytidine hydrochloride (1 mM) on the cytotoxicity of 5FU against mouse myeloma SP2/0-Ag14 (SP2/0) cells lacking hypoxanthine-guanine-phosphoribosyltransferase (HGPRT) and RH4 hybridoma cells possessing HGPRT under asynchronous conditions. **Results**: In both SP2/0 and RH4 cells, 5FU-reduced cell viability was restored by co-treatment but not pre-treatment with 2'-Deoxycytidine hydrochloride, but the effect of the former was often greater than that of the latter, suggesting that HGPRT may be involved in the interaction, although this may not be the primary mechanism. [1]

Solubility Information

Solubility	H2O: 30 mg/mL (113.77 mM),Sonication is recommended. DMSO: 20 mg/mL (75.85 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 (7.58 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	3.7925 mL	18.9624 mL	37.9248 mL
5 mM	0.7585 mL	3.7925 mL	7.585 mL
10 mM	0.3792 mL	1.8962 mL	3.7925 mL
50 mM	0.0758 mL	0.3792 mL	0.7585 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

Iwazaki A, et al. 2'-Deoxycytidine decreases the anti-tumor effects of 5-fluorouracil on mouse myeloma cells. Biol Pharm Bull. 2010;33(6):1024-7.