Data Sheet (Cat.No.T22231)

TargetMol

Adenosine Dialdehyde (ADOX)

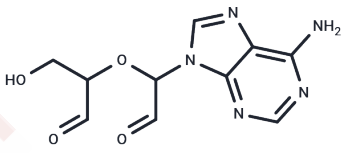
Chemical Properties

CAS No. : 34240-05-6

Formula: C10H11N5O4

Molecular Weight: 265.23

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	Adenosine Dialdehyde (Periodate-oxidized adenosine) is a purine nucleoside analogue. Adenosine Dialdehyde is a potent inhibitor of S-Adenosylhomocysteine hydrolase (SAHH) (Ki=3.3 nM). Adenosine Dialdehyde exhibits potent anti-tumor activity in vivo.
Targets(IC50)	Nucleoside Antimetabolite/Analog,Others
In vitro	Adenosine dialdehyde suppresses MNB cell replication in tissue culture (1.5 μM, 50% inhibition) [1].
In vivo	Adenosine dialdehyde (subcutaneous injection; 1.5-2.5 mg/kg; two 7-day periods interspersed by a 7-day drug free interval(minipump infusion))increases mean life span 80% in diluent treated controls (controls, 21.3 days; AD treated 38.4 days) in mice. Adenosine dialdehyde (subcutaneous injection; 1.5-2.5 mg/kg; infused over a 7-day period (minipump infusion)) significantly increases the mean life span of tumor bearing mice from 20.9 days in diluent treated controls to 35.3 days in AD treated animals. Adenosine dialdehyde (subcutaneous injection; 2-3 mg/kg; infused over a 7-day period (minipump infusion)) does not exhibit any hematopoietic toxicity in mice, and it can significantly suppress murine neuroblastoma tumor growth with little systemic toxicity [2].

Solubility Information

Solubility	DMSO: 102 mg/mL (384.57 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 (7.54 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	3.7703 mL	18.8516 mL	37.7031 mL
5 mM	0.7541 mL	3.7703 mL	7.5406 mL
10 mM	0.377 mL	1.8852 mL	3.7703 mL
50 mM	0.0754 mL	0.377 mL	0.7541 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

G V Madhavan, et al. Synthesis and antiviral evaluation of 6'-substituted aristeromycins: potential mechanism-based inhibitors of S-adenosylhomocysteine hydrolase. J Med Chem.

Tang X, Zeng P, Liu K, et al.The PTM profiling of CTCF reveals the regulation of 3D chromatin structure by O-GlcNAcylation.Nature Communications.2024, 15(1): 2813.

B Bostrom, et al. Inhibitory effect of adenosine dialdehyde on in situ murine neuroblastoma growth.Cancer Res. 1988 Nov 1;48(21):5933-6.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481