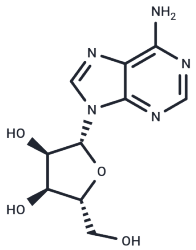
# Data Sheet (Cat.No.T0853)

TargetMol

## Adenosine

### Chemical Properties



CAS No. : 58-61-7

Formula: C10H13N5O4

Molecular Weight: 267.24

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 | Adenosine (D-Adenosine) is a natural product, a ribonucleoside consisting of adenine bound to ribose. Adenosine has vasodilatory, antiarrhythmic and analgesic effects. |
| Targets(IC50) | Apoptosis,Nucleoside Antimetabolite/Analog,Endogenous Metabolite,Autophagy |
| In vitro | **METHODS**: Human prostate cancer cells DU-145, PC3 and LNcap-FGC-10 were treated with Adenosine (0.1-1000 μM) for 48 h. Cell viability was measured by MTT assay.<br>**RESULTS**: Adenosine significantly reduced cell proliferation of DU-145, PC3 and LNcap-FGC10 cell lines in a dose-dependent manner. [1]<br>**METHODS**: Human hepatocellular carcinoma cells HepG2 were treated with Adenosine (2 mM) for 6-24 h. The cell cycle was detected by Flow cytometry.<br>**RESULTS**: Adenosine-induced inhibition of survival was attributed to the arrest of cell cycle progression. Adenosine significantly increased the percentage of G0/G1-phase cells and decreased the percentage of S-phase and G2/M-phase cells in HepG2 cells. [2] |
| In vivo | **METHODS**: To investigate the antidepressant-like effects, Adenosine (1-10 mg/kg) was intraperitoneally injected into mice and subjected to the forced swimming test (FST) and tail suspension test (TST).<br>**RESULTS**: The immobilization time in the FST was shortened by intraperitoneal injection of Adenosine (5-10 mg/kg), and Adenosine (1-10 mg/kg) also produced antidepressant-like effects in the TST. [3] |

### Solubility Information

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|---|---|
| Solubility | DMSO: 166.6 mg/mL (623.41 mM),Sonication is recommended.<br>H2O: 2.7 mg/mL (10.1 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 5% DMSO+95% Saline: 1.05 mg/mL (3.93 mM),Solution.<br>10% DMSO+90% Saline: 2 mg/mL (7.48 mM),Solution.<br>*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 | 3.742 mL | 18.7098 mL | 37.4195 mL |
| 5 mM | 0.7484 mL | 3.742 mL | 7.4839 mL |
| 10 mM | 0.3742 mL | 1.871 mL | 3.742 mL |
| 50 mM | 0.0748 mL | 0.3742 mL | 0.7484 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

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