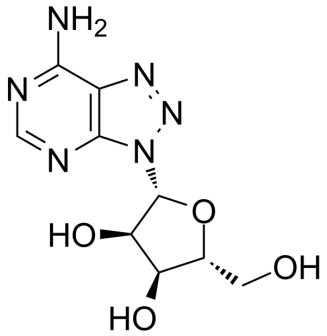
8-Azaadenosine

Cat. No.: HY-115686
CAS No.: 10299-44-2
Molecular Formula: $C_9H_{12}N_6O_4$
Molecular Weight: 268.23
Target: Adenosine Deaminase
Pathway: Metabolic Enzyme/Protease
Storage: -20°C, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (932.04 mM; Need ultrasonic)
H_2O : 3.33 mg/mL (12.41 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.7281 mL	18.6407 mL	37.2814 mL
5 mM	0.7456 mL	3.7281 mL	7.4563 mL
10 mM	0.3728 mL	1.8641 mL	3.7281 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (7.75 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.75 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (7.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

8-Azaadenosine is a potent ADAR1 inhibitor and an A-to-I editing inhibitor. 8-Azaadenosine blocks RNA editing and inhibits proliferation, 3D growth, invasion, and migration in thyroid cancer cells[1][2].

In Vitro

8-Azaadenosine targets ADAR (adenosine deaminases acting on double-stranded RNA) activity only and does not affect ADAR1 mRNA levels[1][2].
8-Azaadenosine (10-25 nM) restores let-7 miRNA biogenesis commensurate with a reduction in ADAR1 expression, RNA editing activity and LIN28B expression in JAK2/BCR-ABL1 transduced progenitors after two weeks in stromal co-culture[1].
8-Azaadenosine (10, 100 nM) shows no effect on BCR-ABL and JAK2 signaling, as demonstrated by qRT-PCR analysis and p-

	CRKL and p-STAT5a Western blot analysis[1]. 8-Azaadenosine (0.1, 0.5, 1, 2 μM; 5 days) decreases cell viability/proliferation in a dose-dependent manner in TPC1 and Cal62 cells[2]. 8-Azaadenosine (1, 2 μM; 16 hours) impedes invasion and migration of TPC1 and Cal62 cells[2]. 8-Azaadenosine (1, 2 μM) inhibits the editing activity in TPC1 and Cal62 cells. By contrast, ADAR1 mRNA levels remains stable in both cells lines[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Acta Pharm Sin B. 2023 Jul 11.
- J Cancer. 2021; 12(24):7334-7348.

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REFERENCES

[1]. Maria Anna Zipeto, et al. ADAR1 Activation Drives Leukemia Stem Cell Self-Renewal by Impairing Let-7 Biogenesis. Cell Stem Cell. 2016 Aug 4;19(2):177-191.

[2]. Julia Ramírez-Moya, et al. ADAR1-mediated RNA editing is a novel oncogenic process in thyroid cancer and regulates miR-200 activity. Oncogene. 2020 Apr;39(18):3738-3753.

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