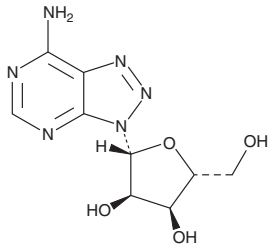
PRODUCT INFORMATION

8-Azaadenosine

Item No. 34622

CAS Registry No.:	10299-44-2
Formal Name:	3-β-D-ribofuranosyl-3H-1,2,3-triazolo[4,5-d]pyrimidin-7-amine
Synonym:	NSC 72961
MF:	$C_9H_{12}N_6O_4$
FW:	268.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 280 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

8-Azaadenosine is supplied as a solid. A stock solution may be made by dissolving the 8-azaadenosine in the solvent of choice, which should be purged with an inert gas. 8-Azaadenosine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 8-azaadenosine in these solvents is approximately 5 and 1 mg/ml, respectively.

8-Azaadenosine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 8-azaadenosine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 8-Azaadenosine has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

8-Azaadenosine is a purine nucleoside analog and an inhibitor of adenosine deaminase acting on RNA 1 (ADAR1), an enzyme that converts adenosine to inosine in dsRNA, a post-transcriptional modification known as A-to-I editing.[1] It inhibits RNA A-to-I editing in, as well as the invasion and migration of, TPC-1 and Cal-62 thyroid cancer cells when used at concentrations of 1 and 2 µM. 8-Azaadenosine (2 mg/kg) increases the *ex vivo* secretion of IFN-γ and TNF-α from $CD8^+$ T cells isolated from mouse spleen in a model of hepatitis B virus (HBV) infection.[2] It decreases serum levels of HBV surface antigen (HBsAg) in the same model.

References

1. Ramírez-Moya, J., Baker, A.R., Slack, F.J., *et al.* ADAR1-mediated RNA editing is a novel oncogenic process in thyroid cancer and regulates miR-200 activity. *Oncogene* **39(18)**, 3738-3753 (2020).
2. Wang, L., Sun, Y., Song, X., *et al.* Hepatitis B virus evades immune recognition via RNA adenosine deaminase ADAR1-mediated viral RNA editing in hepatocytes. *Cell Mol. Immunol.* **18(8)**, 1781-1882 (2021).

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