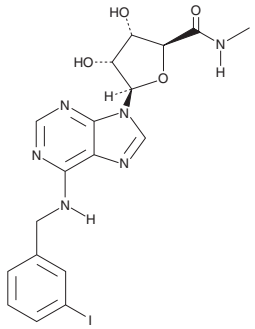
PRODUCT INFORMATION

Piclidenoson

Item No. 28445

CAS Registry No.:	152918-18-8
Formal Name:	1-deoxy-1-[6-[[(3-iodophenyl) methyl]amino]-9H-purin-9-yl]-N-methyl-β-D-ribofuranuronamide
Synonyms:	CF-101, IB-MECA
MF:	$C_{18}H_{19}IN_6O_4$
FW:	510.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 268 nm
Supplied as:	A crystalline 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

Piclidenoson is supplied as a crystalline solid. A stock solution may be made by dissolving the piclidenoson in the solvent of choice, which should be purged with an inert gas. Piclidenoson is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of piclidenoson in these solvents is approximately 2 mg/ml.

Piclidenoson is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, piclidenoson should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Piclidenoson 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

Piclidenoson is an adenosine A_3 receptor agonist (K_i = 1.7 nM).[1] It is selective for adenosine A_3 over A_1 and A_2 receptors (K_is = 55.3 and 3,099 nM, respectively). *In vivo*, piclidenoson (100 µg/kg) reduces wall thickening in a rabbit model of ischemia-reperfusion injury induced by coronary artery occlusion, an effect that can be reversed by the adenosine receptor antagonist 8-*p*-sulfophenyl theophylline.[2] It reduces hepatocellular tumor growth, liver inflammation, and neuropathy in a rat model of bone-residing breast cancer and decreases the number of lung metastases in a model of metastatic murine melanoma.[1] Piclidenoson (1 and 3 mg/kg) also reduces colonic inflammatory cell infiltration and damage in a mouse model of colitis induced by dextran sulfate (DSS; Item No. 23250) and in *IL-10*$^{-/-}$ mice.[3]

References

1. Jacobson, K.A., Merighi, S., Varani, K., *et al*. A_3 adenosine receptors as modulators of inflammation: From medicinal chemistry to therapy. *Med. Res. Rev.* **38(4)**, 1031-1072 (2018).
2. Auchampach, J.A., Rizvi, A., Qiu, Y., *et al*. Selective activation of A3 adenosine receptors with N^6-(3-iodobenzyl)adenosine-5′-*N*-methyluronamide protects against myocardial stunning and infarction without hemodynamic changes in conscious rabbits. *Circ. Res.* **80(6)**, 800-809 (1997).
3. Mabley, J., Soriano, F., Pacher, P., *et al*. The adenosine A_3 receptor agonist, N^6-(3-iodobenzyl)-adenosine-5'-*N*-methyluronamide, is protective in two murine models of colitis. *Eur. J. Pharmacol.* **466(3)**, 323-329 (2003).

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