

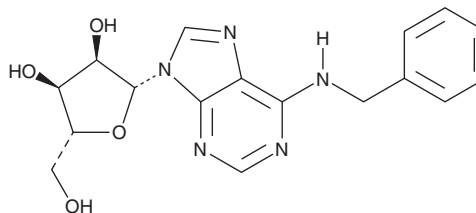
PRODUCT INFORMATION



DNPH1i

Item No. 38531

CAS Registry No.: 4294-16-0
Formal Name: N-(phenylmethyl)-adenosine
Synonyms: 2'-Deoxynucleotide 5'-Phosphate
N-hydrolase 1 Inhibitor,
Benzyladenine Riboside,
N⁶-Benzyladenosine, NSC 70423
MF: C₁₇H₁₉N₅O₄
FW: 357.4
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

DNPH1i is supplied as a solid. A stock solution may be made by dissolving the DNPH1i in the solvent of choice, which should be purged with an inert gas. DNPH1i is soluble in methanol.

Description

DNPH1i is an inhibitor of 2'-deoxynucleotide 5'-phosphate N-hydrolase 1 (DNPH1).¹ It inhibits DNPH1 activity toward the DNPH1 substrate 5-hydroxymethyl-2'-deoxyuridine (hmdU) when used at a concentration of 100 μM. DNPH1i (0.3 μM) reduces the viability of *BRCA1*-deficient SUM149 cells containing single-guide RNA against p53-binding protein 1 (sg53BP1) when used in combination with hmdU but not when used alone. It also reduces the viability of hematological cancer cells, including CEM, HL-60, K562, and RPMI-8226 cells (IC₅₀s = 1.3, 0.93, 5.9, and 4.6 μM, respectively), solid tumor cells, including MCF-7, HeLa, and HOS cells (IC₅₀s = 3.7, 1.9, and 13.6 μM, respectively), and G-361 malignant melanoma cells (IC₅₀ = 15 μM) but also reduces viability of BJ fibroblasts (IC₅₀ = 1.7 μM).²

References

1. Fugger, K., Bajrami, I., Silva Dos Santos, M., *et al.* Targeting the nucleotide salvage factor DNPH1 sensitizes *BRCA1*-deficient cells to PARP inhibitors. *Science* **372(6538)**, 156-165 (2021).
2. Leysen, J.E., Gommeren, W., Van Gompel, P., *et al.* Receptor-binding properties *in vitro* and *in vivo* of ritanserin: A very potent and long acting serotonin-5₂ antagonist. *Mol. Pharmacol.* **27(6)**, 600-611 (1985).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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