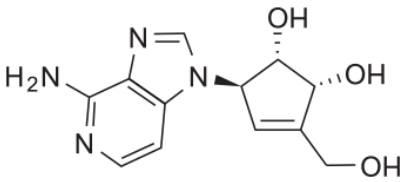
TECHNICAL DATA SHEET

3-Deazaneplanocin A

Catalog Number: ST10022



Size	400 µL
Concentration	10 mM in DMSO
Description	3-Deazaneplanocin A (DZNep) acts as an epigenetic modifier that inhibits histone methyltransferases and decreases global DNA methylation. It is a competitive inhibitor of S-adenosylhomocysteine hydrolase (K_i = 50 pM). It has been specifically shown to inhibit EZH2 protein expression which reduces the trimethylation of lysine 27 on histone H3. When used in combination with other compounds, DZNep can enable chemical reprogramming of mouse embryonic fibroblasts to iPSCs by increasing Oct4 expression.
Molecular Weight	262.26
Molecular Formula	$C_{12}H_{14}N_4O_3$
Chemical Name	(1S,2R,5R)-5-(4-aminoimidazo[4,5-c]pyridin-1-yl)-3-(hydroxymethyl)cyclopent-3-ene-1,2-diol
CAS Number	102052-95-9
PubChem Identifier	73087
Appearance	Colorless liquid
Purity	>97% by HPLC analysis
Formulation	1.05 mg 3-Deazaneplanocin A in 400 µL of DMSO, filter sterilized.
Recommended Usage	Aliquoting the stock solution is recommended to avoid repeated freeze-thaw cycles. For use in cell culture, media should be warmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%.
Storage and Stability	Store at -20°C. Stable for 6 months when stored as directed. Avoid repeated freeze-thaw cycles.
References	Hou, P., et al. (2013) Pluripotent stem cells induced from mouse somatic cells by small-molecule compounds. Science 341(6146): 651-654. PMID: 23868920. Miranda, T.B., et al. (2009) DZNep is a global histone methylation inhibitor that reactivates developmental genes not silenced by DNA methylation. Mol Cancer Ther 8(6): 1579-1588. PMID: 19509260. Tan, J., et al. (2007) Pharmacologic disruption of Polycomb-repressive complex 2-mediated gene repression selectively induces apoptosis in cancer cells. Genes Dev 21(9): 1050-1063. PMID: 17437993. Tseng, C.K., et al. (1989) Synthesis of 3-deazaneplanocin A, a powerful inhibitor of S-adenosylhomocysteine hydrolase with potent and selective in vitro and in vivo antiviral activities. J Med Chem 32(7): 1442-1446. PMID: 2544721.