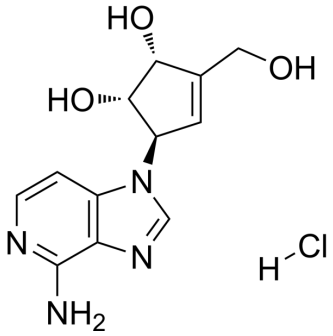
3-Deazaneplanocin A hydrochloride (GMP)

Cat. No.:	HY-12186G
CAS No.:	120964-45-6
Molecular Formula:	$C_{12}H_{15}ClN_4O_3$
Molecular Weight:	298.73
Target:	Histone Methyltransferase; Orthopoxvirus
Pathway:	Epigenetics; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	3-Deazaneplanocin A (DZNep) hydrochloride (GMP) is 3-Deazaneplanocin A hydrochloride (HY-12186) produced by using GMP guidelines. GMP small molecules work appropriately as an auxiliary reagent for cell therapy manufacture. 3-Deazaneplanocin A hydrochloride is a potent histone methyltransferase EZH2 inhibitor[1][2].
IC_{50} & Target	EZH2
In Vitro	3-Deazaneplanocin A (20-200 nM, during 16-28 day) stimulates Oct4 expression in chemically induced pluripotent stem cells (CiPSCs)[2]. 3-Deazaneplanocin A (20-200 nM, during 16-28 day) inhibits DNA and H3K9 methylation at the Oct4 promoter in CiPSCs[2]. 3-Deazaneplanocin A (10 nM, 24 h) promotes developmental competence of cloned pig embryos[3]. 3-Deazaneplanocin A (10 nM, 24 h) decreases the levels of H3K27me3 and H3K9me2 at the 2-cell, 4-cell and blastocyst stages[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Immunofluorescence[3]

Cell Line:	Cloned pig embryos
Concentration:	10 nM
Incubation Time:	24 h
Result:	Decreased H3K27me3 and H3K9me2 by approximately 45%, 37% and 7% at the 2-cell, 4-cell and blastocyst stages, respectively.

CUSTOMER VALIDATION

- Nat Commun. 2022 Jan 10;13(1):12.
- Apoptosis. 2020 Oct;25(9-10):697-714.
- Exp Mol Pathol. 2020 Feb;112:104344.
- J Pharmacol Exp Ther. 2019 Sep;370(3):490-503.

- Biochem Biophys Res Commun. 2018 Sep 10;503(3):2061-2067.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Fiskus W, et al. Combined epigenetic therapy with the histone methyltransferase EZH2 inhibitor 3-deazaneplanocin A and the histone deacetylase inhibitor panobinostat against human AML cells. Blood. 2009 Sep 24;114(13):2733-43.

[2]. Hou P, et al. Pluripotent stem cells induced from mouse somatic cells by small-molecule compounds. Science. 2013 Aug 9;341(6146):651-4.

[3]. Zhao C, et al. DZNep and UNC0642 enhance in vitro developmental competence of cloned pig embryos. Reproduction. 2018 Apr 1;157(4):359-369.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA