Web: www.taiclone.com
Tel: +886-2-2735-9682
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DMH-1

Catalog No: tcsc3210

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1206711-16-1

Formula:
$C_{24}H_{20}N_4O$

Pathway:
Autophagy;TGF-beta/Smad

Target:
Autophagy;TGF-β Receptor

Purity / Grade:
>98%

Solubility:
DMSO : 11.5 mg/mL (30.23 mM; Need ultrasonic and warming)

Observed Molecular Weight:
380.44

Product Description

DMH-1 is a potent and selective **BMP** inhibitor with **IC_{50}**s of 27/107.9/
IC50 & Target: IC50: 27 nM (ALK1), 107.9 nM (ALK2), [1]

In Vitro:

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DMH-1 (0.5 μM) induces regulation of OCT4, Nanog, and PAX6 protein expression. DMH-1 significantly reduces the percentage of cells expressing the pluripotency marker proteins OCT4 and Nanog in both SM3 and CA6 cells. PAX6 expression is significantly up-regulated by day 5 and day 7 in CA6 and SM3 cells, respectively. DMH-1 induces regulation of pluripotency and neural precursor marker mRNAs. PAX6 can regulate the expression of SOX1 independently by manipulating the DMH-1 concentration during the neural induction of hiPSCs[2]. DMH-1 (5 μM and 10 μM) inhibits CDDP-induced autophagy in HeLa cells and enhances the ability of CDDP to reduce HeLa cell viability, inhibits tamoxifen-induced autophagy in MCF-7 cells and enhances the ability of tamoxifen to reduce MCF-7 cell viability, inhibits 5-FU-induced autophagy in both MCF-7 and HeLa cells but does not affect the inhibitory effects of 5-FU on MCF-7 and HeLa cell viability. DMH-1 enhances the apoptotic induction effects of CDDP on HeLa cells after 24 h treatment. DMH-1 inhibits HeLa and MCF-7 cell proliferation[3]. DMH-1 (20 μM) reduces the canonical phosphorylation of Smads 1,5 and 9. DMH-1 in combination with Cisplatin significantly decreases Ki-67 positive staining in the OVCAR8 cells. DMH-1 (20 μM) upregulates JAG1, reduces CYP1B1 and increases HAPLN1 expression in both OVCAR8 and NCI-RES cells[4].

In Vivo: DMH1 (5 mg/kg, i.p.) treatment significantly reduces the tumor growth in human lung cancer xenograft model[5].