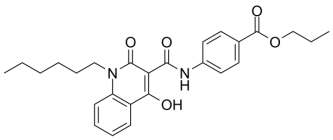
GSA-10

Cat. No.:	HY-12317
CAS No.:	300833-95-8
Molecular Formula:	$C_{26}H_{30}N_2O_5$
Molecular Weight:	450.53
Target:	Smo; Hedgehog
Pathway:	Stem Cell/Wnt
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 1.67 mg/mL (3.71 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2196 mL	11.0980 mL	22.1961 mL
	5 mM	---	---	---
	10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

GSA-10 is a potent smooth (Smo) receptor agonist. GSA-10 is a potent osteogenic molecule. GSA-10 can mediate Hedgehog (Hh) signaling. GSA-10 can be used in regenerative medicine for cancer disease and in the study of fat development[1][2][3].

IC_{50} & Target

Smoothened receptor[1]

In Vitro

GSA-10 (3 μM; 6 days) can induce cell differentiation into osteoblasts in pluripotent stromal cells C3H10T1/2 with an EC_{50} of 1.2 μM[1][2].

GSA-10 (10 μM; 24 h) inhibits fat formation in 3T3-L1 preadipocytes by activating the Smo-Lkb1-Ampk pathway[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[3]

Cell Line:	3T3-L1 preadipocyte
Concentration:	10 μM
Incubation Time:	24 h

Result:	Significantly promoted the phosphorylation of Ampk.

REFERENCES

[1]. Gorojankina T, et al. Discovery, molecular and pharmacological characterization of GSA-10, a novel small-molecule positive modulator of Smoothened. Mol Pharmacol. 2013 May;83(5):1020-9.

[2]. Manetti F, et al. Design, synthesis and biological characterization of a new class of osteogenic (1H)-quinolone derivatives. Eur J Med Chem. 2016 Oct 4;121:747-757.

[3]. Fleury A, et al. Hedgehog associated to microparticles inhibits adipocyte differentiation via a non-canonical pathway. Sci Rep. 2016 Mar 24;6:23479. doi: 10.1038/srep23479. PMID: 27010359; PMCID: PMC4806302.

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