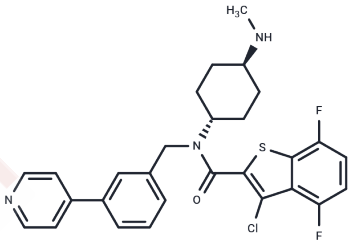
Data Sheet (Cat.No.T24754)

TargetMol

Hh-Ag1.5

Chemical Properties



CAS No. :	612542-14-0
Formula:	C28H26ClF2N3OS
Molecular Weight:	526.04
Storage:	Store at low temperature,Keep away from direct sunlight Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hh-Ag1.5 (SAG-1.5) is a potent Hedgehog (Hh) agonist (EC50: 1 nM) and Smoothened (Smo) receptor agonist, with an EC50 of 1 nM and Ki values between 0.5 and 2.3 nM for Smo. Hh-Ag1.5-mediated reprogramming breaks the quiescent state of non-injured hepatic stem cells and thus rescues liver failure. Hh-Ag1.5 induced differentiation of hiPSCs into skin precursor cells, spinal motor neurons and spinal sensory neurons.
Targets(IC50)	Hedgehog/Smoothened
In vitro	Hh-Ag1.5 completely binds to the Smo-containing membranes with the Ki value of 0.52 nM.[2] The Smo agonist Hh-Ag1.5 displays nanomolar-range potency stimulation of Gli-responsive reporter activity, with an EC50 of 7 nM.[3] Hh-Ag1.5 (5 μM; 3 weeks) facilitates the dramatic expansion of quiescent CD133+ CD45- liver stem cells (Hh3A cells) enriched from the non-injured liver in vitro.[4]

Solubility Information

Solubility	DMSO: 26.3 mg/mL (50 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.8 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.901 mL	9.505 mL	19.010 mL
5 mM	0.3802 mL	1.901 mL	3.802 mL
10 mM	0.1901 mL	0.9505 mL	1.901 mL
50 mM	0.038 mL	0.1901 mL	0.3802 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

King RW. Roughing up Smoothened: chemical modulators of hedgehog signaling. J Biol. 2002 Nov 6;1(2):8.
Frank-Kamenetsky M, et al. Small-molecule modulators of Hedgehog signaling: identification and characterization of Smoothened agonists and antagonists. J Biol. 2002 Nov 6;1(2):10.
Rominger CM, et al. Evidence for allosteric interactions of antagonist binding to the smoothened receptor. J Pharmacol Exp Ther. 2009 Jun;329(3):995-1005.
Mitra A, et al. A small molecule Hedgehog agonist HhAg1.5 mediated reprogramming breaks the quiescence of noninjured liver stem cells for rescuing liver failure. Transl Res. 2019 Mar;205:44-50.

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