PCSK9-IN-13

Cat. No.: HY-148758

CAS No.: 2244129-23-3

Molecular Formula: $C_{30}H_{33}N_5O_2$

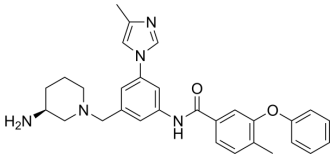
Molecular Weight: 495.62

Target: Ser/Thr Protease

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (201.77 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0177 mL	10.0884 mL	20.1767 mL
	5 mM	0.4035 mL	2.0177 mL	4.0353 mL
	10 mM	0.2018 mL	1.0088 mL	2.0177 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (5.04 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.04 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (5.04 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

PCSK9-IN-13(compound 3f) is a potent PCSK9 inhibitor, which can antagonize low-density lipoprotein (LDL) receptor binding by binding to PCSK9, with an IC_{50} of 537 nM[1].

In Vitro

PCSK9-IN-13(compound 3f) (0.1 or 1 μM) restores LDL uptake in HepG2 hepatocytes in a dose-dependent manner[1].

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

In Vivo

PCSK9-IN-13(compound 3f) (3.28 or 16.4 mg/kg/day, s.c., 14 days) in male C57BL/6 mice dose not show a reduction in total

cholesterol at a dose of 3.28 mg/kg, however, a dose of 16.4 mg/kg shows a significant reduction of total cholesterol plasma levels by approximately 10%, and exhibits excellent bioavailability[1].

The pharmacokinetic parameters of PCSK9-IN-13(compound 3f) in C57BL/6 mice

Parameter	SC	PO	IV(single)	IV(cassette)
Dose(mg/kg)	20	20	5	0.4
T_{max}(h)	1	2	-	-
C_{max}(ng/mL)	2207	52.6	-	-
CL(L/h/kg)	-	-	1.09	0.3
V_{ss}(L/kg)	-	-	3.87	9.13
$T_{1/2}$(h)	5.47	-	9.86	25.7
AUC_{∞}(h*ng/mL)	16811	-	4605	1472
MRT_{∞}(h)	-	-	3.56	34.9
F(%)	91.3	0.527	-	-

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

REFERENCES

[1]. Benny J. Evison, et al. A small molecule inhibitor of PCSK9 that antagonizes LDL receptor binding via interaction with a cryptic PCSK9 binding groove.Bioorganic & Medicinal Chemistry

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