Nevanimibe hydrochloride

Cat. No.: HY-100399A

CAS No.: 133825-81-7

Molecular Formula: $C_{27}H_{40}ClN_3O$

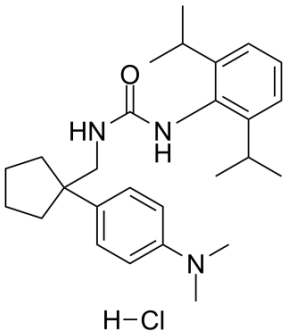
Molecular Weight: 458.08

Target: Acyltransferase; Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

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 : 41.67 mg/mL (90.97 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1830 mL	10.9151 mL	21.8302 mL
	5 mM	0.4366 mL	2.1830 mL	4.3660 mL
	10 mM	0.2183 mL	1.0915 mL	2.1830 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: ≥ 2.08 mg/mL (4.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.54 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nevanimibe hydrochloride (PD-132301 hydrochloride) is an orally active and selective acyl-coenzyme A:cholesterol O-acyltransferase 1 (ACAT1) inhibitor with an EC_{50} of 9 nM. Nevanimibe hydrochloride inhibits ACAT2 with an EC_{50} of 368 nM. Nevanimibe hydrochloride induces cell apoptosis and has the potential for adrenocortical cancer[1].

IC_{50} & Target

ACAT1	ACAT2
9 nM (EC50)	368 nM (EC50)

In Vitro

Coincubation of Nevanimibe hydrochloride (PD-132301 hydrochloride; ATR101 hydrochloride; 3 nM-30 μM) and Cholesterol markedly increases toxicity in a dose-dependent manner, where 3 nM Nevanimibe in the presence of 60 μg/mL Cholesterol reduces survival by 60% after 24 hours. All doses of Nevanimibe (3 nM-30 μM) induces cytoxicity in the presence of Cholesterol, whereas treatment with Cholesterol in the absence of Nevanimibe has no effect on cell viability[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	The H295R and HAC clone 15 (HAC15) human ACC cell lines
Concentration:	3 nM-30 μM
Incubation Time:	24 hours
Result:	3 nM-3 μM exhibited no toxicity, whereas 30 μM treatment reduced survival by approximately 40% within 24 hours.

REFERENCES

[1]. LaPensee CR, et al. ATR-101, a Selective and Potent Inhibitor of Acyl-CoA Acyltransferase 1, Induces Apoptosis in H295R Adrenocortical Cells and in the Adrenal Cortex of Dogs. Endocrinology. 2016 May;157(5):1775-88.

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