Leelamine hydrochloride

Cat. No.: HY-110028

CAS No.: 16496-99-4

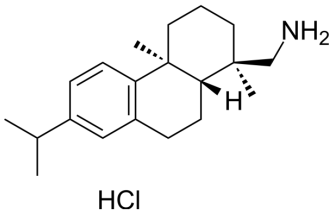
Molecular Formula: $C_{20}H_{32}ClN$

Molecular Weight: 321.93

Target: Cannabinoid Receptor; Fatty Acid Synthase (FASN); Androgen Receptor

Pathway: GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor

Storage: -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (77.66 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1063 mL	15.5313 mL	31.0627 mL
	5 mM	0.6213 mL	3.1063 mL	6.2125 mL
	10 mM	0.3106 mL	1.5531 mL	3.1063 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 (7.77 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.77 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Leelamine hydrochloride is a tricyclic diterpene molecule that is extracted from the bark of pine trees[1]. Leelamine hydrochloride is a cannabinoid receptor type 1 (CB1) agonist and a inhibitor of SREBP1-regulated fatty acid/lipid synthesis in prostate cancer cells that is not affected by androgen receptor status. Leelamine hydrochloride suppresses transcriptional activity of androgen receptor, which is known to regulate fatty acid synthesis[2,3].

IC_{50} & Target

CB1

REFERENCES

[1]. Kuzu OF, et al. Leelamine mediates cancer cell death through inhibition of intracellular cholesterol transport. Mol Cancer Ther. 2014 Jul;13(7):1690-703.

[2]. A.O. Ibegbu, et al. Therapeutic Potentials and uses of Cannabinoid Agonists in Health and Disease Conditions. British Journal of Pharmacology and Toxicology 3(2): 76-88, 2012

[3]. Singh KB, et al. Leelamine is a Novel Lipogenesis Inhibitor in Prostate Cancer Cells In Vitro and In Vivo. Mol Cancer Ther. 2019 Aug 8.

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