

JD-5037

Chemical Properties

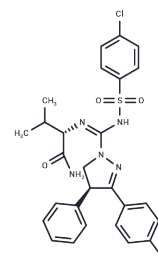
CAS No. : 1392116-14-1

Formula: C₂₇H₂₇Cl₂N₅O₃S

Molecular Weight: 572.51

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	JD-5037 is a novel, peripherally restricted CB1R antagonist with an IC ₅₀ of 1.5 nM.
Targets(IC ₅₀)	Cannabinoid Receptor
In vivo	JD5037, when administered at a dosage of 3 mg/kg/day intraperitoneally (i.p.), effectively induces uniform reductions in body weight and mitigates high-fat diet (HFD)-induced hyperglycemia, hepatic injury, and steatosis in obese Magel2-null mice. Likewise, oral administration of JD5037 (3 mg/kg/day, p.o.) significantly diminishes tumor size and eliminates tumors in DEN-treated mice. Moreover, JD5037 reduces anandamide (AEA) levels in hepatocellular carcinoma (HCC) samples from mice.
Animal Research	Mice: JD-5037 is formulated in vehicle (V; 1% Tween80, 4% DMSO, 95% Saline). Obese mice are treated chronically (28 d) with vehicle (V; 1% Tween80, 4% DMSO, 95% Saline), JD5037, or SLV319 at a dose of 3 mg/kg, i.p. Body weight and food intake are monitored daily. Mice are euthanized by cervical dislocation under anesthesia; the brain, hypothalamus, liver, and combined fat pads are removed, weighed, and snap-frozen, and trunk blood is collected for determining the endocrine and biochemical parameters

Solubility Information

Solubility	DMSO: 50 mg/mL (87.33 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7467 mL	8.7335 mL	17.4669 mL
5 mM	0.3493 mL	1.7467 mL	3.4934 mL
10 mM	0.1747 mL	0.8733 mL	1.7467 mL
50 mM	0.0349 mL	0.1747 mL	0.3493 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.

Reference

- Knani I,etal.Targeting the endocannabinoid/CB1 receptor system for treating obesity in Prader-Willi syndrome.Mol Metab. 2016 Oct 22;5(12):1187-1199.
- Tan S, Liu H, Ke B, et al. The peripheral CB1 receptor antagonist JD5037 attenuates liver fibrosis via a CB1 receptor/ β -arrestin1/ Akt pathway. The peripheral CB1 receptor antagonist JD5037 attenuates liver fibrosis via a CB1 receptor/ β -arrestin1/Akt pathway. British Journal of Pharmacology. 2020, 177(12): 2830-2847
- Li P, Lin Q, Sun S, et al. Inhibition of cannabinoid receptor type 1 sensitizes triple-negative breast cancer cells to ferroptosis via regulating fatty acid metabolism. Cell Death & Disease. 2022, 13(9): 1-15.
- Chorvat RJ.etal.Peripherally restricted CB1 receptor blockers.Bioorg Med Chem Lett. 2013 Sep 1;23(17):4751-60.
- Mukhopadhyay B,etal.Cannabinoid receptor 1 promotes hepatocellular carcinoma initiation and progression through multiple mechanisms.Hepatology. 2015 May;61(5):1615-26.
- Tan S, Liu H, Ke B, et al. The peripheral CB1 receptor antagonist JD5037 attenuates liver fibrosis via a CB1 receptor/ β -arrestin1/Akt pathway[J]. British Journal of Pharmacology. 2020, 177(12): 2830-2847.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481