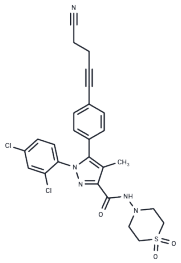
Data Sheet (Cat.No.T22563)

TargetMol

AM6545

Chemical Properties



CAS No. : 1245626-05-4

Formula: C26H23Cl2N5O3S

Molecular Weight: 556.46

Storage: Store at low temperature
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	AM6545 is a selective and potent peripheral restricted cannabinoid receptor 1 (CB1) antagonist that inhibits the CB2 receptor, ameliorates hypometabolic obesity and improves adipokine secretion in monosodium glutamate-induced obese mice, and may be useful in the study of obesity and diabetes.
Targets(IC50)	Cannabinoid Receptor
In vitro	**METHODS**: AM6545 (0.5 mM) was used to treat 3T3-L1 adipocytes to examine possible beiging effects of peripheral CB1R antagonist treatment, and the expression of key beiging markers was examined. **RESULTS**: AM6545 significantly increased many genes involved in adipocyte coagulation, including peroxisome proliferator-activated receptor gamma coactivator 1-α (Pgc1α), PR domain containing 16 (Prdm16), and uncoupling protein 1 (Ucp1), cell death-inducing DNA fragmentation factor α-like effector A (Cieda), long-chain fatty acid protein 3 (Elovl3), tumor necrosis factor receptor superfamily member 9 (Cd137), T-box transcription factor (Tbx1), transmembrane protein 26 (Tmem26), cbp/p300 interacting transactivator 1, fibroid/endoplasmic reticulum calcium 2+-ATPase 2b (Serca2b), ryanodine receptor 2 (Ryr2). [2]
In vivo	**METHODS**: AM6545 (1 mg/kg, intraperitoneal injection) and CNO (3 mg/kg) were administered to mice, and the discrimination index values of NORT in the vagus nerve were observed 48 hours after administration. **RESULTS**: AM6545 can improve memory consolidation through an adrenergic mechanism involving vagal afferent nerves. [1]

Solubility Information

Solubility	DMSO: 5 mg/mL (8.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7971 mL	8.9854 mL	17.9707 mL
5 mM	0.3594 mL	1.7971 mL	3.5941 mL
10 mM	0.1797 mL	0.8985 mL	1.7971 mL
50 mM	0.0359 mL	0.1797 mL	0.3594 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

Martínez-Torres S, et al. Peripheral CB1 receptor blockade acts as a memory enhancer through a noradrenergic mechanism. Neuropsychopharmacology. 2023 Jan;48(2):341-350.
Paszkiewicz RL,et al. A Peripheral CB1R Antagonist Increases Lipolysis, Oxygen Consumption Rate, and Markers of Beiging in 3T3-L1 Adipocytes Similar to RIM, Suggesting that Central Effects Can Be Avoided. Int J Mol Sci. 2020 Sep 10;21(18):6639.