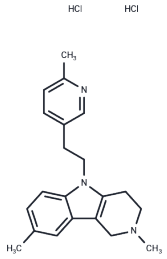
Data Sheet (Cat.No.T6562)

TargetMol

Latrepirdine dihydrochloride

Chemical Properties



CAS No. : 97657-92-6

Formula: C21H25N3·2HCl

Molecular Weight: 392.37

Appearance: no data available

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

Biological Description

Description	Latrepirdine dihydrochloride (Dimebolin dihydrochloride) is an orally active, and neuroactive antagonist of multiple drug targets, including histamine receptors, GluR, and 5-HT receptors, used as an antihistamine drug.
Targets(IC50)	Beta Amyloid,5-HT Receptor,Adrenergic Receptor,GluR,Autophagy,Histamine Receptor
In vitro	Latrepirdine increases succinate dehydrogenase activity (MTT-assay), mitochondrial membrane potential (DeltaPsim), and cellular ATP levels in primary mouse cortical neurons and human neuroblastoma cells (SH-SY5Y). Latrepirdine enhances mitochondrial function both in the absence and presence of stress and Dimebon-treated cells are partially protected to maintain cell viability. [1] Latrepirdine leads to enhanced mTOR- and Atg5-dependent autophagy in cultured mammalian cells. [2] latrepirdine stimulates MTOR- and ATG5-dependent autophagy, leading to the reduction of intracellular levels of APP metabolites, including Aβ in cultured cells. [3] Latrepirdine stimulates the degradation of α-syn in differentiated SH-SY5Y neurons, and in mouse brain following chronic administration, in parallel with elevation of the levels of markers of autophagic activity. [4] Latrepirdine increases intracellular ATP levels and glucose transporter 3 translocation to the plasma membrane in primary neuron. [5]
In vivo	Latrepirdine treatment of TgCRND8 transgenic mice is linked to improved learning behavior and reduced accumulation of Aβ42 and α-synuclein. [2] Latrepirdine administration results in increased levels of biomarkers associated with autophagy activation in the brains of TgCRND8 (APP K670M, N671L, V717F) or wild-type mice, and is also associated with behavioral improvement, reduced Aβ neuropathology, and prevention of autophagic failure in TgCRND8 mice. [3]

Solubility Information

Solubility	DMSO: 39.2 mg/mL (99.91 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5486 mL	12.7431 mL	25.4861 mL
5 mM	0.5097 mL	2.5486 mL	5.0972 mL
10 mM	0.2549 mL	1.2743 mL	2.5486 mL
50 mM	0.051 mL	0.2549 mL	0.5097 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

Zhang S, et al. J Alzheimers Dis, 2010, 21(2), 389-402.
Steele JW, et al. Mol Psychiatry, 2013, 18(8), 889-897.
Lenasi H, et al. Cardiovasc Res, 2003, 59(4), 844-853.
Steele JW, et al. Mol Psychiatry, 2013, 18(8), 882-888.
Weisová P, et al. Transl Psychiatry, 2013, 3, e317.