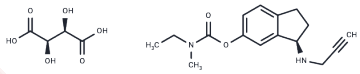
Data Sheet (Cat.No.T39513)

TargetMol

Ladostigil hemitartrate

Chemical Properties



CAS No. : 209394-46-7

Formula: C20H26N2O8

Molecular Weight: 422.434

Storage: 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	Ladostigil hemitartrate (TV-3326) is a dual inhibitor of cholinesterase and brain-selective monoamine oxidase (MAO), with IC50 values of 37.1 μM for MAO-B and 31.8 μM for AChE. Possessing neuroprotective, antioxidant, and anti-inflammatory properties, it is commonly used in research related to depression and Alzheimer's disease.
Targets(IC50)	Others,Cholinesterase (ChE),Monoamine Oxidase
In vitro	Ladostigil hemitartrate (1-10 μM) demonstrates significant neuroprotective properties by preventing the decrease of mitochondrial membrane potential (ψ), attenuating apoptotic cascades, and inhibiting ROS production triggered by oxidative stress (OS) insults[2]. Additionally, it inhibits caspase-3 activation, upregulates Bcl-2, and decreases Bad and Bax gene and protein expression in human neuroblastoma SK-N-SH cells[2].
In vivo	Ladostigil hemitartrate, administered orally at 17 mg/kg daily for six weeks, effectively eliminates hyperanxiety and depressive-like behaviors in Sprague-Dawley rats, observed through the elevated plus maze (EPM) and forced swim tests (FST) from puberty into adulthood. This treatment regimen notably inhibited brain monoamine oxidase A and B (MAO-A and B) activity by over 60% and mitigated the heightened anxiety and depressive symptoms in both male and female rats prenatally stressed (PS). Additionally, a single oral dose of Ladostigil hemitartrate at 50 μmol/kg was sufficient to reverse episodic memory loss in the object recognition test in rats, showcasing its potential therapeutic effects on memory impairments.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3673 mL	11.8363 mL	23.6726 mL
5 mM	0.4735 mL	2.3673 mL	4.7345 mL
10 mM	0.2367 mL	1.1836 mL	2.3673 mL
50 mM	0.0473 mL	0.2367 mL	0.4735 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

Denya I, et, al. Design, synthesis and evaluation of indole derivatives as multifunctional agents against Alzheimer's disease. Medchemcomm. 2018 Jan 16;9(2):357-370.
Weinreb O, et, al. Ladostigil: a novel multimodal neuroprotective drug with cholinesterase and brain-selective monoamine oxidase inhibitory activities for Alzheimer's disease treatment. Curr Drug Targets. 2012 Apr;13(4):483-94.
Weinstock M, et, al. Ladostigil, a novel multifunctional drug for the treatment of dementia co-morbid with depression. J Neural Transm Suppl. 2006;(70):443-6.
Poltyrev T, et, al. Effect of chronic treatment with ladostigil (TV-3326) on anxiogenic and depressive-like behaviour and on activity of the hypothalamic-pituitary-adrenal axis in male and female prenatally stressed rats. Psychopharmacology (Berl). 2005 Aug;181(1):118-25.