
Product Data Sheet

Product Name: Ladostigil hemitartrate

Cat. No.: GC63466

Chemical Properties

Cas. No. 209394-46-7

Formula $C_{16}H_{20}N_2O_2 \cdot 1/2 C_4H_6O_6$ M.Wt 694.77

Solubility DMSO : 50 mg/mL (71.97 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

Ladostigil (TV-3326) hemitartrate is an orally active dual inhibitor of cholinesterase and brain-selective monoamine oxidase (MAO), with IC50s of 37.1 and 31.8 μ M for MAO-B and AChE, respectively. Ladostigil hemitartrate exhibits neuroprotective, antioxidant and anti-inflammatory activities. Ladostigil hemitartrate can be used for the research of depression and Alzheimer's disease[1][2].

Ladostigil (1-10 μ M) hemitartrate exerts neuroprotective activities, including a prevention of the fall of the mitochondrial membrane potential (ψ), attenuation of apoptotic cascades and an inhibition of ROS production induced by OS insults[2]. Ladostigil (1-10 μ M) hemitartrate has a significant neuroprotective activity, including inhibition of caspase-3 activation, induction of Bcl-2 and reduction of Bad and Bax gene and protein expression in human neuroblastoma SK-N-SH cells[2].

Ladostigil (17 mg/kg; p.o. daily for 6 weeks) hemitartrate abolishes their hyperanxiety and depressive-like behaviour in the elevated plus maze (EPM) and forced swim tests (FST) tests in adulthood from puberty to prenatally-stressed rats[4]. Ladostigil (50 μ mol/kg; single p.o.) hemitartrate restores the loss of episodic memory in the object recognition test in rats[3].

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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- [1]. 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. [2]. 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. [3]. 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. [4]. 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.

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