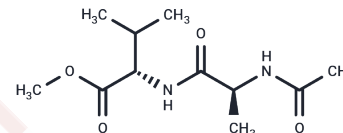


ZZL-7

Chemical Properties

CAS No. : 99141-91-0
 Formula: C₁₁H₂₀N₂O₄
 Molecular Weight: 244.29
 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	ZZL-7 is a fast-onset antidepressant agent that disrupts the interaction between neuronal nitric oxide synthase (nNOS) and the serotonin transporter (SERT) in the dorsal raphe nucleus (DRN). It easily crosses the blood-brain barrier and has research value in major depressive disorder (MDD).
Targets(IC50)	Serotonin Transporter
In vitro	In 293T cells transfected with nNOS and SERT, ZZL-7 (1.0 μM; 2 h) significantly decreases the SERT-nNOS complex level[1].
In vivo	ZZL-7 (10 mg/kg; intraperitoneal administration) reverses chronic unpredictable mild stress (CMS)-induced depressions behaviors 2 hours after treatment. ZZL-7 (10, 20, and 40 mg/kg; Intra-gastric administration; once) produces antidepressant-like behaviors dose dependently 2 hours after treatment. ZZL-7 (10 mg/kg, intraperitoneally) causes significantly increases firing frequency of serotonergic neurons 2 hours after treatment in vivo electrophysiology in SERT-Cre mice. In wild-type mice, ZZL-7 reduces immobility time[1].

Solubility Information

Solubility	DMSO: 12 mg/mL (49.12 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (8.19 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0935 mL	20.4675 mL	40.935 mL
5 mM	0.8187 mL	4.0935 mL	8.187 mL
10 mM	0.4093 mL	2.0467 mL	4.0935 mL
50 mM	0.0819 mL	0.4093 mL	0.8187 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

Nan Sun, et al. Design of fast-onset antidepressant by dissociating SERT from nNOS in the DRN. Science. 2022 Oct 28;378(6618):390-398.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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