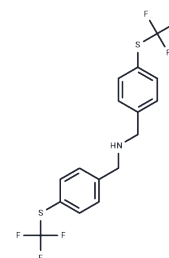


MY33-3

Chemical Properties

CAS No. : 2204280-41-9
Formula: C₁₆H₁₃F₆NS₂
Molecular Weight: 397.4
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	MY33-3 is a powerful and specific inhibitor of receptor protein tyrosine phosphatase (RPTP) β/ζ , demonstrating an IC ₅₀ value of approximately 0.1 μ M. Moreover, MY33-3 exhibits inhibitory activity against PTP-1B with an IC ₅₀ value of about 0.7 μ M. Additionally, MY33-3 has been shown to effectively decrease ethanol consumption and alleviate neuroinflammation and cognitive dysfunction induced by Sevoflurane.
In vitro	MY33-3, at a concentration of 1 μ M with a pretreatment time of 5 minutes, inhibits the ethanol-induced activation of TrkA and ALK in SH-SY5Y cells without altering the overall protein levels of TrkA and ALK. Furthermore, MY33-3, within a concentration range of 0.1-10 μ M over 24 hours, reduces LPS-induced nitrite production and the increase of iNOS in BV2 microglial cells. In a cell viability assay conducted on SH-SY5Y cells with a 1 μ M concentration of MY33-3 pretreated for 5 minutes and co-treated for 15 minutes, the compound decreased the ethanol-induced activation of TrkA and ALK, indicating no significant effect on the total protein levels of TrkA or ALK.
In vivo	Administered orally (p.o.) at a dosage of 60 mg/kg on days 3 and 4, MY33-3 notably decreases ethanol consumption in male C57BL/6J mice (8-10 weeks old) undergoing a two-bottle drinking in the dark (DID) procedure with 20% ethanol. This comparison highlights a significant reduction in ethanol intake from day 2 to day 3 and a diminished preference for the ethanol solution by day 3, without impacting the overall fluid consumption. Furthermore, MY33-3 (administered intraperitoneally (i.p.)) counteracts the decline in discrimination index and the deterioration of motor learning abilities induced by Sevoflurane, illustrating its potential in reversing cognitive impairments associated with substance exposure.

A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5164 mL	12.5818 mL	25.1636 mL
5 mM	0.5033 mL	2.5164 mL	5.0327 mL
10 mM	0.2516 mL	1.2582 mL	2.5164 mL
50 mM	0.0503 mL	0.2516 mL	0.5033 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

Fernández-Calle R, et, al. Pharmacological inhibition of Receptor Protein Tyrosine Phosphatase β/ζ (PTPRZ1) modulates behavioral responses to ethanol. *Neuropharmacology*. 2018 Jul 15;137:86-95.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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