

TCN238

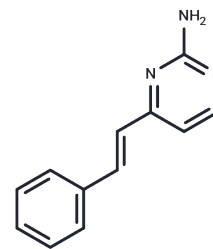
Chemical Properties

CAS No. : 125404-04-8

Formula: C₁₂H₁₁N₃

Molecular Weight: 197.24

Storage: Store at low temperature, Keep away from direct sunlight
 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	TCN238 is an orally bioavailable positive allosteric modulator of the metabotropic glutamate receptor 4 (mGluR4) with an EC ₅₀ of 1 μM.
Targets(IC ₅₀)	GluR
In vitro	TCN238 has a greater than 30-fold selectivity for mGluR4 over mGluR5 using human recombinant receptors in CHO-K1 cells[1].
In vivo	TCN238 has no activity at the adenosine A _{2A} , serotonin 5-HT _{1A} , or α _{2A} -adrenergic receptors at concentrations up to 10 μM. In a haloperidol-induced catalepsy rat model of Parkinson's disease, it dose-dependently reduces catalepsy with an ED ₅₀ of approximately 1 mg/kg. TCN 238 administration in rats leads to downregulation of the mGluR4 gene, GRM4, in the hippocampus and the gene for the GABA _A receptor α subunit, GABRA1, in the frontal cortex without affecting hippocampal-dependent memory[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (760.49 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 5 mg/mL (25.35 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	5.070 mL	25.3498 mL	50.6997 mL
5 mM	1.014 mL	5.070 mL	10.1399 mL
10 mM	0.507 mL	2.535 mL	5.070 mL
50 mM	0.1014 mL	0.507 mL	1.014 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

Pershina E V , Arkhipov V I . Subacute activation of mGlu4 receptors causes the feedback inhibition of its gene expression in rat brain[J]. Life Sciences, 2016, 153:50-54.

East S P , Bamford S , Dietz M G A , et al. An orally bioavailable positive allosteric modulator of the mGlu4 receptor with efficacy in an animal model of motor dysfunction[J]. Bioorganic & Medicinal Chemistry Letters, 2010, 20(16): 4901-4905.

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