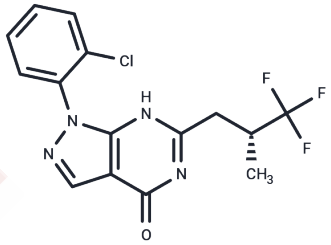
Data Sheet (Cat.No.T10481L)

TargetMol

BAY 73-6691

Chemical Properties



CAS No. : 794568-92-6

Formula: C15H12ClF3N4O

Molecular Weight: 356.73

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	BAY 73-6691 is an inhibitor of brain penetrant PDE9A.
Targets(IC50)	PDE
In vitro	BAY 73-6691 dose-dependently attenuates oxidative stress induced by Aβ25-35. The BAY 73-6691 dose-dependently alleviates cell viability loss due to Aβ25-35 treatment. The BAY 73-6691 attenuates Aβ25-35-induced increase of apoptosis cells[1]. It is found that when SH-SY5Y cells are cultured by Aβ25-35, a high degree of cell apoptosis is observed, while additional stimulation with BAY 73-6691 causes attenuation of cell apoptosis. BAY 73-6691 at 200 μg/mL almost neutralizes Aβ25-35-induced oxidative damage.
In vivo	BAY 73-6691 significantly enhances the performance of Aβ25-35-injected mice in learning tasks from days 7 to 10 (day 7, F(5,54)=65.153; day 8, F(5,54)=62.340; day 9, F (5,54)=37.529; day 10, F(5,54)=38.624; P<0.001), and dose-dependently reverses the Aβ25-35-triggered reduction in dwell time by the 10th day post-injection (day 10, F (5,54)=27.360, P<0.001). Furthermore, a 3 mg/kg dosage nearly completely negates the delay in escape-latency observed on days 9 to 10, indicating that BAY 73-6691 mitigates the adverse effects induced by Aβ25-35 injections on these measures. Importantly, BAY 73-6691 does not affect swimming speed, demonstrating that its beneficial effects are not due to changes in motor skills. Similarly, in control (sham) mice, BAY 73-6691 does not impair spatial memory or affect four specified indices, nor does it significantly influence hippocampal neuron apoptosis, underscoring its safety and specificity in targeting Aβ25-35-related cognitive disruptions without altering normal hippocampal

Solubility Information

Solubility	DMSO: 160 mg/mL (448.52 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (9.25 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8032 mL	14.0162 mL	28.0324 mL
5 mM	0.5606 mL	2.8032 mL	5.6065 mL
10 mM	0.2803 mL	1.4016 mL	2.8032 mL
50 mM	0.0561 mL	0.2803 mL	0.5606 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

Li J, et al. Protective effects of BAY 73-6691, a selective inhibitor of phosphodiesterase 9, on amyloid-β peptides-induced oxidative stress in in-vivo and in-vitro models of Alzheimer's disease. Brain Res. 2016 Jul 1;1642:327-335.