

Z218484536

Chemical Properties

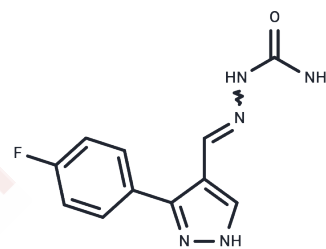
CAS No. : 1223877-07-3

Formula: C₁₁H₁₀FN₅O

Molecular Weight: 247.23

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	Z218484536 is a selective phosphoserine phosphatase (PSPH) inhibitor that can penetrate the blood-brain barrier. It binds to PSPH with an affinity (K _d) of approximately 0.23 μM. By doing so, Z218484536 reduces levels of L-serine and D-serine in astrocytes. It also inhibits spontaneous seizures without causing significant side effects and demonstrates effective antiepileptic properties in the temporal lobe epilepsy (TLE) model.
Targets(IC ₅₀)	Phosphatase
In vitro	Z218484536 inhibits the release of L-serine in cultured astrocytes with an IC ₅₀ of 0.4 μM and reduces intracellular L-serine levels with an IC ₅₀ of 0.38 μM when used in concentrations ranging from 40 to 2,000 nM for 24 hours. Additionally, Z218484536 shows no cytotoxic effects on the proliferation of HepG2 cells when used at concentrations between 0.078 and 40 μM for 48 hours.
In vivo	Z218484536, when administered via intraperitoneal injection at doses of 0.5-20 mg/kg once daily for 3 days, can delay acute seizures and reduce their severity while exhibiting anticonvulsant effects in the pentylenetetrazol (PTZ) induced acute seizure model. In a TLE mouse model induced by (red algae acid) KA, Z218484536 at 2 mg/kg and 4 mg/kg intraperitoneally once daily for 3 days, reduces hippocampal L-serine and D-serine levels. Spontaneous seizures in TLE mice are inhibited by Z218484536 at a dose of 2 mg/kg or 4 mg/kg once daily over a 7-week period. Administering 4 mg/kg of Z218484536 intraperitoneally for 7 days does not affect emotional state or motor ability in mice. Additionally, Z218484536 at doses of 1 mg/kg or 2 mg/kg given intraperitoneally once daily for 2 weeks over a period of 3.5 months decreases seizure activity in a cynomolgus monkey TLE model.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0448 mL	20.2241 mL	40.4482 mL
5 mM	0.809 mL	4.0448 mL	8.0896 mL
10 mM	0.4045 mL	2.0224 mL	4.0448 mL
50 mM	0.0809 mL	0.4045 mL	0.809 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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