

VU6004909

Chemical Properties

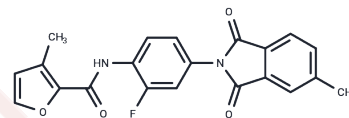
CAS No. : 1860797-76-7

Formula: C₂₁H₁₅FN₂O₄

Molecular Weight: 378.35

Appearance: Solid

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	VU6004909 is a potent mGlu5 receptor orthosteric modulator (EC ₅₀ :25.7nM) that reverses MK801-induced cortical activity enhancement and cognitive dysfunction, and can be used in the study of neurological disorders.
Targets(IC ₅₀)	GluR
In vitro	VU6004909 is a blood-brain barrier-penetrating orthosteric modulator of mGlu1 with half-maximal effective concentrations (EC ₅₀) of 25.7 nM [2] and 31 nM [1] for human- and rat-derived mGlu1, respectively.

Solubility Information

Solubility	DMSO: 4 mg/mL (10.57 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6431 mL	13.2153 mL	26.4306 mL
5 mM	0.5286 mL	2.6431 mL	5.2861 mL
10 mM	0.2643 mL	1.3215 mL	2.6431 mL
50 mM	0.0529 mL	0.2643 mL	0.5286 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

Yohn SE, et al. Activation of the mGlu1 metabotropic glutamate receptor has antipsychotic-like effects and is required for efficacy of M4 muscarinic receptor allosteric modulators. *Mol Psychiatry*. 2020 Nov;25(11):2786-2799.

Garcia-Barrantes PM, et al. Lead optimization of the VU0486321 series of mGlu(1) PAMs. Part 2: SAR of alternative 3-methyl heterocycles and progress towards an in vivo tool. *Bioorg Med Chem Lett*. 2016 Feb 1;26(3):751-756.

Dogra S, et al. Metabotropic Glutamate Receptors As Emerging Targets for the Treatment of Schizophrenia. *Mol Pharmacol*. 2022 May;101(5):275-285.

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