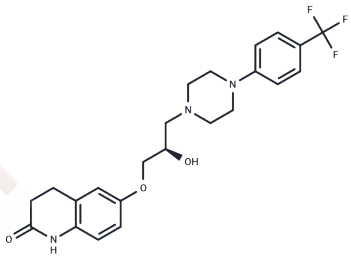
# Data Sheet (Cat.No.T73447)

NP10679

## Chemical Properties



CAS No. : 2914889-88-4

Formula: C23H26F3N3O3

Molecular Weight: 449.47

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

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|---|---|
| Description | NP10679 is an orally available, selective, brain-penetrating, potent, and pH-sensitive N-methyl-D-aspartate (NMDA) receptor inhibitor of the GluN2B subunit.NP10679 inhibits histamine H1, hERG channels, and CYP enzymes, and may be useful in the study of epilepsy and ischemic stroke. |
| Targets(IC50) | NMDAR,Histamine Receptor,Cytochromes P450,Potassium Channel |
| In vitro | NP10679 is an NMDA receptor inhibitor containing GluN2B that is more effective than physiological pH. It exhibits inhibitory effects on 5-HT2A, α1A adrenergic receptor, H1 histamine receptor, and hERG channels[2]. |
| In vivo | In the Male C57BL/6 middle cerebral artery occlusion (MCAo) model of transient ischemia mice, NP10679 (2, 5, and 10 mg/kg; intraperitoneal injection; administered 15 minutes prior to transient ischemia) dose-dependently reduces infarct volumes, with an ED50 of 1 mg/kg[2]. |

## Solubility Information

| | |
|---|---|
| Solubility | DMSO: 80 mg/mL (177.99 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.2248 mL | 11.1242 mL | 22.2484 mL |
| 5 mM | 0.445 mL | 2.2248 mL | 4.4497 mL |
| 10 mM | 0.2225 mL | 1.1124 mL | 2.2248 mL |
| 50 mM | 0.0445 mL | 0.2225 mL | 0.445 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

Zaczek R, et al. Phase 1 Clinical Results for NP10679, a pH-sensitive GluN2B-selective N-methyl-d-aspartate Receptor Inhibitor. Clin Pharmacol Drug Dev. 2023 Jan 15.

Myers SJ, et al. A Glutamate N-Methyl-d-Aspartate (NMDA) Receptor Subunit 2B-Selective Inhibitor of NMDA Receptor Function with Enhanced Potency at Acidic pH and Oral Bioavailability for Clinical Use. J Pharmacol Exp Ther. 2021 Oct;379(1):41-52.