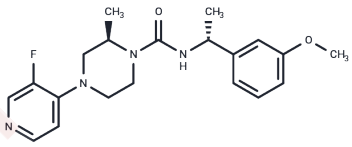
Data Sheet (Cat.No.T61497)

TargetMol

Rho-Kinase-IN-2

Chemical Properties



CAS No. : 2573071-18-6

Formula: C20H25FN4O2

Molecular Weight: 372.44

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	Rho-Kinase-IN-2 (Compound 23) is an orally active and selective inhibitor of Rho Kinase (ROCK) with CNS penetration, exhibiting a high affinity for ROCK2 with an IC50 of 3 nM. This compound is of potential interest for further investigations in Huntington's disease research [1].
Targets(IC50)	Others,ROCK
In vitro	Treatment with Rho-Kinase-IN-2 (0-10 mM) for 1 hour led to concentration-dependent alterations in phosphorylation levels, specifically an increase in AKT phosphorylation and a decrease in MYPT1 phosphorylation, observed across A7r5 and PANC1 cell lines. Western Blot Analysis confirmed these effects, quantifying the potency of Rho-Kinase-IN-2 in modulating AKT and MYPT1 phosphorylation with EC50 and IC50 values of 28 nM and 14 nM, respectively.
In vivo	Administering Rho-Kinase-IN-2 orally at 10 mg/kg six times at intervals of 0.5, 1, 2, 4, 8, and 12 hours demonstrated a dose- and time-dependent engagement with ROCK1 and ROCK2 targets. Similar administration at doses of 10 or 20 mg/kg, either once daily (QD) or twice daily (BID) for two weeks, exhibited excellent tolerability. A single dose ranging from 1-20 mg/kg revealed a direct dose- and time-dependent correlation between brain exposure and MYPT1 phosphorylation status. Moreover, a single administration at 10 or 20 mg/kg resulted in decreased mean arterial, systolic, diastolic blood pressures, and heart rate. Continuous treatment at 10 mg/kg twice daily for 90 days led to lower-than-expected brain concentrations. These findings were consistent across various animal models, including male C57BL/6 mice, 3-4-month-old heterozygote Q175DN KI and wild-type littermate mice, heterozygote HTT zQ175DN knock-in mice, and CD1 mice, demonstrating the compound's pharmacodynamics and pharmacokinetics profiles in preclinical settings.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.685 mL	13.425 mL	26.850 mL
5 mM	0.537 mL	2.685 mL	5.370 mL
10 mM	0.2685 mL	1.3425 mL	2.685 mL
50 mM	0.0537 mL	0.2685 mL	0.537 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.