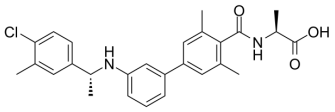
NIBR0213

Cat. No.:	HY-18166
CAS No.:	1233332-14-3
Molecular Formula:	$C_{27}H_{29}ClN_2O_3$
Molecular Weight:	464.98
Target:	LPL Receptor
Pathway:	GPCR/G Protein
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description

NIBR-0213 is a potent, orally active and selective S1P1 antagonist with efficacy in experimental autoimmune encephalomyelitis. NIBR-0213 displays potent and comparable potency on human and rat S1P1 (IC_{50} of 2.0 nM and 2.3 nM, respectively) in GTPγ^{35}S assays[1].

In Vitro

NIBR-0213 displays an inhibitory activity on hS1P1 with an IC_{50} of 2.5 nM whereas it is inactive (IC_{50} >10 μM) on S1P2, S1P3, and S1P4 in Ca^{2+} mobilization assays[1].

NIBR-0213 displays potent and comparable potency on human and rat S1P1 (IC_{50} of 2.0 nM and 2.3 nM, respectively) in GTPγ^{35}S assays, whereas on mouse S1P1 with an IC_{50} of 8.5 nM[1].

NIBR-0213 shows an ~3,000-fold selectivity against human S1P5 in the GTPγ^{35}S assay[1].

NIBR-0213 is a competitive S1P1 antagonist with a calculated K_d of 0.37±0.031 nM[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

NIBR-0213 (given orally at 30 mg/kg to rats) reduces the peripheral blood lymphocyte (PBL) counts by 75%-85% within 14 hr and maintained this effect up to 24 hr posttreatment[1].

NIBR-0213 (30 mg/kg and 60 mg/kg) is efficacious when given therapeutically in a mouse experimental autoimmune encephalomyelitis (EAE) model[1].

The PK properties of NIBR-0213 shows a moderate clearance (26 mL/min/kg) and a high oral bioavailability (69%), leading to significant exposure after oral dosing[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Lewis or Wistar rats (220-250 g, males)[1]
Dosage:	30 mg/kg
Administration:	Orally
Result:	Reduced the PBL counts by 75%-85% within 14 hr and maintained this effect up to 24 hr posttreatment.

Animal Model:	C57BL/6 mice bearing EAE model[1]
Dosage:	30 mg/kg and 60 mg/kg

Administration:	30 mg/kg twice per day (BID) for 3 days and then increased to 60 mg/kg BID until the remainder of the experiment. In total, the treatment lasted 26 days
Result:	Resulted in a gradual reduction in disease-scores, with a divergence from vehicle controls that became significant after 5 days.

REFERENCES

[1]. Jean Quancard, et al. A potent and selective S1P(1) antagonist with efficacy in experimental autoimmune encephalomyelitis. Chem Biol. 2012 Sep 21;19(9):1142-51.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA