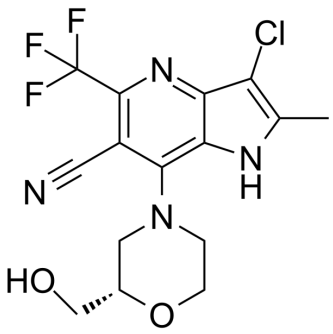
PF-06869206

Cat. No.:	HY-112065
CAS No.:	2227425-05-8
Molecular Formula:	$C_{15}H_{14}ClF_3N_4O_2$
Molecular Weight:	374.75
Target:	Sodium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (266.84 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6684 mL	13.3422 mL	26.6845 mL
	5 mM	0.5337 mL	2.6684 mL	5.3369 mL
	10 mM	0.2668 mL	1.3342 mL	2.6684 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.67 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PF-06869206 is an orally bioavailable selective inhibitor of the sodium-phosphate cotransporter NaPi2a (SLC34A1) with an IC_{50} of 380 nM[1].

IC_{50} & Target

IC50: 380 nM (NaPi2a/SLC34A1)[1]

In Vitro

PF-06869206 shows a balance of attributes with 380 nM NaPi2a inhibition potency, excellent subtype selectivity, and acceptable aqueous solubility (46 μM). PF-06869206 is profiled for potency in the rodent NaPi2a and NaPi2c cell lines. PF-06869206 shows comparable submicromolar activity for the human, rat, and mouse NaPi2a isoforms with IC_{50}s of 0.4±0.047 μM and 0.54±0.099 μM for rat NaPi2a and mouse NaPi2a, respectively[1].

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

In Vivo	PF-06869206 is evaluated in rodent PK studies to determine suitability for in vivo pharmacology exploration. Results show moderate clearance in both rat and mouse. Oral bioavailability at 5 mg/kg is good in rat and moderate in mouse. At higher oral doses of 50 mg/kg, supraproportional increases in exposure are observed in both species, suggestive of saturation of clearance. PF-06869206 has moderate terminal elimination half-life ($t_{1/2}$=1.35 h, and 0.75 h for Wistar-Han rats (10 mg/kg, iv), and C57BL6 mice (1 mg/kg, iv)). Furthermore, permeability is good (14×10^{-6} cm/s), and rat liver microsome (RLM) clearance is low (<14 μL/min/mg; HLM=39 μL/min/mg)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Rats and Mice[1] Male Wistar-Han rats (n=2) are treated with PF-06869206 (1 mg/kg, 5 mg/kg, and 50 mg/kg; 2 mL/kg for iv or 10 mL/kg for po) . C57BL6 mice (n=2) are treated with PF-06869206 (1 mg/kg, 5 mg/kg, and 50 mg/kg; 2 mL/kg for iv or 10 mL/kg for po) [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Clin Invest. 2023 Feb 23;e164610.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Filipski KJ, et al. Discovery of Orally Bioavailable Selective Inhibitors of the Sodium-Phosphate Cotransporter NaPi2a (SLC34A1). ACS Med Chem Lett. 2018 Apr 12;9(5):440-445.

Caution: Product has not been fully validated for medical applications. For research use only.

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