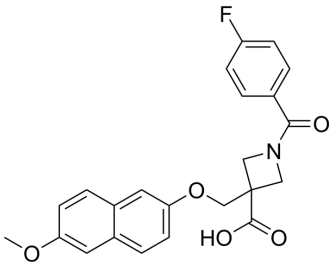
PF-04418948

Cat. No.:	HY-18966
CAS No.:	1078166-57-0
Molecular Formula:	$C_{23}H_{20}FNO_5$
Molecular Weight:	409.41
Target:	Prostaglandin Receptor
Pathway:	GPCR/G Protein
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 : 50 mg/mL (122.13 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4425 mL	12.2127 mL	24.4254 mL
	5 mM	0.4885 mL	2.4425 mL	4.8851 mL
	10 mM	0.2443 mL	1.2213 mL	2.4425 mL

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

In Vivo

1. Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
   Solubility: ≥ 6.5 mg/mL (15.88 mM); Clear solution
2. Add each solvent one by one: 2% DMSO >> 40% PEG300 >> 5% Tween-80 >> 53% saline
   Solubility: ≥ 2.6 mg/mL (6.35 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.11 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.11 mM); Clear solution
5. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	PF-04418948 is an orally active, potent and selective prostaglandin EP_2 receptor antagonist with an IC_{50} of 16 nM[1].
IC_{50} & Target	EP2

	16 nM (IC_{50})
In Vitro	PF-04418948 (2 μM; 90 min) inhibits prostaglandin E2 (PGE2)-induced increase in cAMP[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay[1]

Cell Line:	CHO cells
Concentration:	2 μM
Incubation Time:	90 min
Result:	Inhibited prostaglandin E2 (PGE2)-induced increase in cAMP in cells expressing EP2 receptors with a functional K_B value of 1.8 nM.

In Vivo

PF-04418948 (oral gavage; 1, 3, and 10 mg/kg; once) attenuats the butaprost-induced cutaneous blood flow response[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague Dawley rats[1]
Dosage:	1, 3, and 10 mg/kg
Administration:	Oral gavage; 1, 3, and 10 mg/kg; once
Result:	Reduced the peak and AUC butaprost-induced cutaneous blood flow response in a dose-dependent fashion.

CUSTOMER VALIDATION

- Brain Behav Immun. 2021 Sep 6;98:337-348.
- Neurosci Bull. 2023 Jun 15.
- J Virol. 2018 Sep 26;92(20):e01018-18.
- Research Square Preprint. 2023 May 19.

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REFERENCES

[1]. af Forselles KJ, et al. In vitro and in vivo characterization of PF-04418948, a novel, potent and selective prostaglandin EP2 receptor antagonist. Br J Pharmacol. 2011 Dec;164(7):1847-1856.

[2]. Birrell MA, et al. Selectivity profiling of the novel EP2 receptor antagonist, PF-04418948, in functional bioassay systems: atypical affinity at the guinea pig EP2 receptor. Br J Pharmacol. 2013 Jan;168(1):129-138.

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