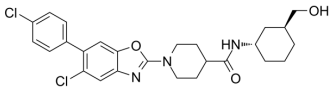
PF-4693627

Cat. No.:	HY-125415
CAS No.:	1312815-93-2
Molecular Formula:	$C_{26}H_{29}Cl_2N_3O_3$
Molecular Weight:	502.43
Target:	PGE synthase
Pathway:	Immunology/Inflammation
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (199.03 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9903 mL	9.9516 mL	19.9033 mL
	5 mM	0.3981 mL	1.9903 mL	3.9807 mL
	10 mM	0.1990 mL	0.9952 mL	1.9903 mL

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

BIOLOGICAL ACTIVITY

Description

PF-4693627 is a potent, selective and orally bioavailable microsomal prostaglandin E synthase-1 (*m*PGES-1) inhibitor (IC_{50}=3 nM) for the treatment of inflammation caused by osteoarthritis (OA) and rheumatoid arthritis (RA)[1].

IC_{50} & Target

IC50: 3 nM (mPGES-1)[1]

In Vitro

PF-4693627 also inhibits mPGES-1 with IC_{50}s of 180 and 6 nM in HWB-1483 and human fetal fibroblast, respectively[1].

PF-4693627 shows high activity in lipopolysaccharide (LPS) stimulated human whole blood (HWB) cell assay (IC_{50}=109 nM)[1].

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

In Vivo

PF-4693627 (10 mg/kg; orally) inhibits 63% of PGE2 production relative to vehicle control in Guinea pig carrageenan stimulated air pouch model[1].

PF-4693627 (1.0 mg/kg; i.v.) shows good bioavailability (59%) and modest half life ($t_{1/2}$=3.7 h) in Sprague-Dawley rats[1].

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

Animal Model:	Guinea pig with carrageenan stimulated air pouch inflammation model[1]
Dosage:	10 mg/kg
Administration:	Administered orally
Result:	63% PGE2 inhibition.

Animal Model:	Sprague-Dawley rats[1].
Dosage:	1.0 mg/kg (Pharmacokinetic Analysis)
Administration:	Administered i.v.
Result:	Clearance (CL), volume of distribution (Vd_{ss}), $t_{1/2}$, mean residence time (MRT) and bioavailability (F) is 12 mL/min/kg, 3.0 L/kg, 3.7 h, 4.42 h, 59%, respectively.

REFERENCES

[1]. Arhancet GB, et al. Discovery and SAR of PF-4693627, a potent, selective and orally bioavailable mPGES-1 inhibitor for the potential treatment of inflammation. Bioorg Med Chem Lett. 2013 Feb 15;23(4):1114-9.

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