Omidenepag isopropyl

Cat. No.: HY-111406

CAS No.: 1187451-19-9

Molecular Formula: $C_{26}H_{28}N_6O_4S$

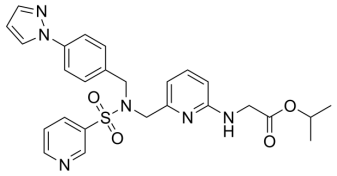
Molecular Weight: 520.6

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 (96.04 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9209 mL	9.6043 mL	19.2086 mL
	5 mM	0.3842 mL	1.9209 mL	3.8417 mL
	10 mM	0.1921 mL	0.9604 mL	1.9209 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.80 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Omidenepag isopropyl is a selective EP2 receptor agonist. Omidenepag isopropyl is converted to the active product Omidenepag during corneal penetration, and Omidenepag is a highly selective EP2 receptor agonist. Omidenepag isopropyl shows only weak affinity for EP1, EP2, and FP receptors. Omidenepag isopropyl is under development for the treatment of glaucoma as an intraocular pressure (IOP)-lowering agent.

IC_{50} & Target

EP2

In Vivo

Omidenepag isopropyl at 0.0001%, 0.001%, or 0.01%, Xalatan, or vehicle was topically administered to one eye in ocular normotensive monkeys. IOP change after drug administration was compared to the predosing baseline value established on day 1. Omidenepag isopropyl also shows significant and dose-dependent IOP-lowering effects at doses of 0.0001%, 0.001%,

and 0.01% in ocular normotensive monkeys, with mean maximal IOP reductions of 2.4 ± 0.6, 7.6 ± 1.7, and 13.3 ± 1.2 mm Hg at each tested concentration, respectively. The significant decreases in IOP for 0.001% and 0.01% OMDI at time 0 of day 7.
Omidenepag isopropyl is hydrolyzed in the eye to Omidenepag (OMD), an EP2 receptor agonist , with a significant ocular hypotensive effect in both ocular normotensive and hypertensive animal models[1].
In ocular hypertensive monkeys finds that Omidenepag isopropyl lowers IOP by increasing both trabecular outflow facility and uveoscleral outflow[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kirihara T, et al. Pharmacologic Characterization of Omidenepag Isopropyl, a Novel Selective EP2 Receptor Agonist, as an Ocular Hypotensive Agent. Invest Ophthalmol Vis Sci. 2018 Jan 1;59(1):145-153.

[2]. Fuwa M, et al. Effects of a Novel Selective EP2 Receptor Agonist, Omidenepag Isopropyl, on Aqueous Humor Dynamics in Laser-Induced Ocular Hypertensive Monkeys. J Ocul Pharmacol Ther. 2018 Sep;34(7):531-537.

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