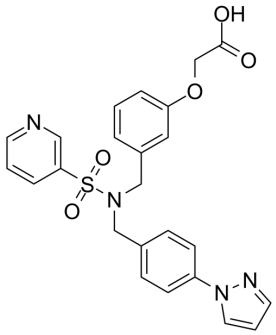
Taprenepag

Cat. No.:	HY-14899
CAS No.:	752187-80-7
Molecular Formula:	$C_{24}H_{22}N_4O_5S$
Molecular Weight:	478.52
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 : ≥ 100 mg/mL (208.98 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0898 mL	10.4489 mL	20.8978 mL
	5 mM	0.4180 mL	2.0898 mL	4.1796 mL
	10 mM	0.2090 mL	1.0449 mL	2.0898 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 (5.22 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.22 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Taprenepag (CP-544326) is a potent and selective prostaglandin EP(2) agonist with IC_{50}s of 10 and 15 nM for human and rat EP2, respectively. Taprenepag shows selectivity for EP2 over other EP receptors (IC50s>3200 nM for EP1, EP3, and EP4) and a panel of 37 G protein-coupled receptors[1].

In Vitro

Taprenepag (CP-544326) (0.01-1000 nM) increases cAMP levels in HEK293 cells expressing human EP2 (EC_{50}=2.8 nM).
Taprenepag has poor corneal permeability in an ex vivo rabbit corneal model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Sci Adv. 2021 Apr 2;7(14):eabf1268.
- iScience. 2023 Sep 4.

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REFERENCES

[1]. Prasanna G, et al. Effect of PF-04217329 a prodrug of a selective prostaglandin EP(2) agonist on intraocular pressure inpreclinical models of glaucoma. Exp Eye Res. 2011 Sep;93(3):256-64.

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