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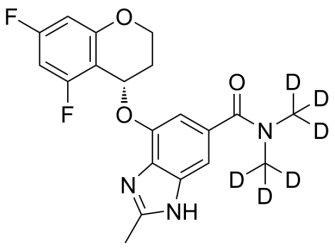
Tegoprazan-d_6

Cat. No.:	HY-17623S
Molecular Formula:	$C_{20}H_{13}D_6F_2N_3O_3$
Molecular Weight:	393.42
Target:	Proton Pump; Na+/K+ ATPase
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Tegoprazan (CJ-12420; RQ-00000004), a potassium-competitive acid blocker, is a reversible, oral active and highly selective inhibitor of gastric H+/K+-ATPase that could control gastric acid secretion and motility, with IC_{50} values ranging from 0.29-0.52 μM for porcine, canine, and human H^+/K^+-ATPases in vitro. Tegoprazan significantly improves colitis in mice and enhances the intestinal epithelial barrier function. Tegoprazan is promising for research of Inflammatory bowel, gastric acid-related, motilityimpaired diseases[1][2][3].

In Vitro

Tegoprazan (1.0 mM and 3.0 mM, 4 h) reduces DSS-induced colitis by maintaining high junction integrity of the epithelial mucosa in Caco-2 cells[1].

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

RT-PCR[1]

Cell Line:	Caco-2 cells
Concentration:	1.0 mM and 3.0 mM
Incubation Time:	4 h
Result:	Protected the intestinal epithelial tight junction barrier and inhibits the increase in intestinal permeability.

In Vivo

Tegoprazan (30 mg / kg, p.o., twice daily for 5 days) alleviates the severity of dinitrobenzene sulfonic acid (DNBS)-induced reducedcolon length and colonic damage, as well as protecting against DNBS-induced colon inflammation in mice colon[1].
Tegoprazan (3 mg/kg and 10 mg/kg, p.o., 5 h) inhibits basal gastric acid secretion in a dose-dependent manner[2].
Tegoprazan (0.1, 1 and 10 mg/kg, p.o.) exerts an antiulcer effect in a dose-dependent manner[2].

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

Animal Model:	Pylorus-Ligated Rats[2]
Dosage:	3 mg/kg and 10 mg/kg
Administration:	p.o., a single dose
Result:	Inhibited basal gastric acid secretion in a dose-dependent manner and was effective at a

	single dose in Pylorus-Ligated rats.

Animal Model:	Naproxen-induced acute gastric ulcer rat model[2]
Dosage:	0.1, 1 and 10 mg/kg
Administration:	p.o., a single day or daily for 5 days
Result:	Exerted an antiulcer effect in a dose-dependent manner and was effective at a single dose in naproxen-induced acute gastric ulcer rat model.

Animal Model:	DNBS and Tegoprazan-induced rats[2]
Dosage:	30 mg/kg
Administration:	p.o., twice daily for 5 days
Result:	Reduced mRNA expression levels of proinflammatory cytokines, especially interleukin-17 (IL17) in DNBS and Tegoprazan-induced rats.

REFERENCES

[1]. Takahashi N, Take Y. Tegoprazan, a Novel Potassium-Competitive Acid Blocker to Control Gastric Acid Secretion and Motility. J Pharmacol Exp Ther. 2018 Feb;364(2):275-286.

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