Abeprazan hydrochloride

Cat. No.: HY-109079A

CAS No.: 1902954-87-3

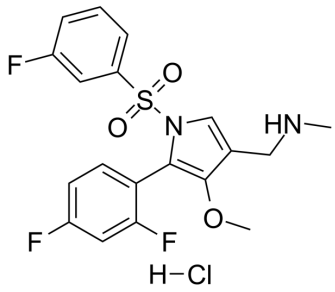
Molecular Formula: $C_{19}H_{18}ClF_3N_2O_3S$

Molecular Weight: 446.87

Target: Proton Pump

Pathway: Membrane Transporter/Ion Channel

Storage: -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (55.94 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.2378 mL	11.1889 mL	22.3779 mL
	5 mM	0.4476 mL	2.2378 mL	4.4756 mL
	10 mM	0.2238 mL	1.1189 mL	2.2378 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 (5.59 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.59 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.59 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Abeprazan hydrochloride (DWP14012 hydrochloride) is a potassium-competitive acid blocker. Abeprazan hydrochloride inhibits H^+, K^+- ATPase by reversible potassium-competitive ionic binding with no acid activation required. Abeprazan hydrochloride is developed as a potential alternative to proton pump inhibitor for the treatment of acid-related diseases[1].

In Vitro

The mechanism of action of Abeprazan hydrochloride is reversibly binding to H^+, K^+ATPase, and, unlike that of PPIs, does not require acidic environment for drug activation[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Abeprazan hydrochloride (DWP14012 hydrochloride) inhibits acid secretion in a dose-dependent manner and the inhibition

of gastric acid secretion is equal to or greater than that of vonoprazan, a previously approved P-CAB, in various in vivo studies using pylorus-ligated rats, lumen-perfused rat models and heidenhain pouch dog models[1].

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

REFERENCES

[1]. Sunwoo J, et al. Safety, tolerability, pharmacodynamics and pharmacokinetics of DWP14012, a novel potassium-competitive acid blocker, in healthy male subjects. Aliment Pharmacol Ther. 2018 Jul;48(2):206-218.

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