Abeprazan

Cat. No.: HY-109079

CAS No.: 1902954-60-2

Molecular Formula: $C_{19}H_{17}F_3N_2O_3S$

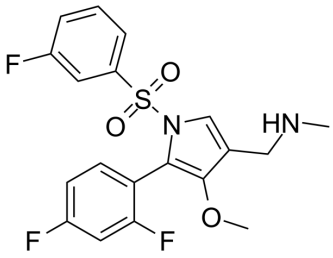
Molecular Weight: 410.41

Target: Proton Pump

Pathway: Membrane Transporter/Ion Channel

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 : 50 mg/mL (121.83 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4366 mL	12.1829 mL	24.3659 mL
	5 mM	0.4873 mL	2.4366 mL	4.8732 mL
	10 mM	0.2437 mL	1.2183 mL	2.4366 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 (6.09 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.09 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.09 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Abeprazan (DWP14012) is a potassium-competitive acid blocker. Abeprazan inhibits H^+, K^+- ATPase by reversible potassium-competitive ionic binding with no acid activation required. Abeprazan 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 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 inhibits acid secretion in a dose-dependent manner and the inhibition of gastric acid secretion was 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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