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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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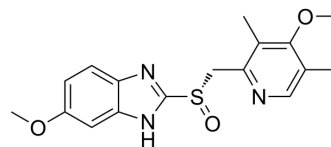
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Esomeprazole

Cat. No.:	HY-17021
CAS No.:	119141-88-7
Molecular Formula:	C ₁₇ H ₁₉ N ₃ O ₃ S
Molecular Weight:	345.42
Target:	Proton Pump; Bacterial
Pathway:	Membrane Transporter/Ion Channel; Anti-infection
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 : 125 mg/mL (361.88 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.8950 mL	14.4751 mL	28.9503 mL
	5 mM		0.5790 mL	2.8950 mL	5.7901 mL
	10 mM		0.2895 mL	1.4475 mL	2.8950 mL

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

BIOLOGICAL ACTIVITY

Description

Esomeprazole ((S)-Omeprazole) is a potent and orally active proton pump inhibitor and reduces acid secretion through inhibition of the H⁺, K⁺-ATPase in gastric parietal cells. Esomeprazole has the potential for symptomatic gastroesophageal reflux disease research^{[1][2][3]}.

IC₅₀ & Target

H⁺, K⁺-ATPase^{[1][2]}

In Vitro

Esomeprazole (25-100 μM; 20 hours; MDA-MB-468 cells) treatment suppresses growth of triple-negative breast cancer cell in vitro in a dose-dependent manner through increase in their intracellular acidification^[1].

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

Cell Viability Assay^[1]

Cell Line:	MDA-MB-468 cells
Concentration:	25 μM, 50 μM, 75 μM, 100 μM

	Incubation Time:	20 hours
	Result:	Suppressed growth of triple-negative breast cancer cell in vitro in a dose-dependent manner.
In Vivo	Esomeprazole (30-300 mg/kg; oral gavage; daily; for 19 or 11 days; C57BL/6J mice) treatment significantly inhibits the progression of fibrosis throughout the lungs of the animals. Esomeprazole also reduces circulating markers of inflammation and fibrosis^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	C57BL/6J mice (8-weeks old, 25-30 g) treated with cotton smoke-induced lung injury ^[2]
	Dosage:	30 mg/kg, 300 mg/kg
	Administration:	Oral gavage; daily; for 19 or 11 days
	Result:	Significantly inhibited the progression of fibrosis throughout the lungs of the animals.

REFERENCES

- [1]. Wayne Goh, et al. Use of proton pump inhibitors as adjunct treatment for triple-negative breast cancers. An introductory study. J Pharm Pharm Sci. 2014;17(3):439-46.
- [2]. Christina Nelson, et al. Therapeutic Efficacy of Esomeprazole in Cotton Smoke-Induced Lung Injury Model. Front Pharmacol. 2017 Jan 26;8:16.
- [3]. Thomas J Johnson, et al. Esomeprazole: a clinical review. Am J Health Syst Pharm. 2002 Jul 15;59(14):1333-9.

Caution: Product has not been fully validated for medical applications. For research use only.

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