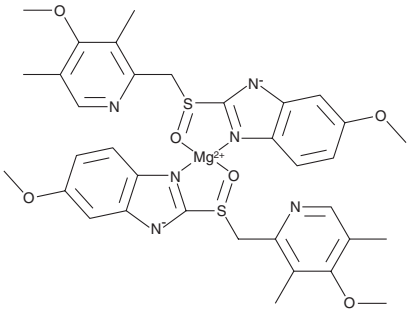
PRODUCT INFORMATION

Esomeprazole Magnesium

Item No. 17326

CAS Registry No.: 161973-10-0
Formal Name: (T-4)-*bis*[6-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl-κO]-1H-benzimidazolato-κN^3]-magnesium
Synonyms: (–)-Omeprazole Magnesium, (S)-Omeprazole Magnesium
MF: $C_{34}H_{36}MgN_6O_6S_2$
FW: 713.1
Purity: ≥95%
UV/Vis.: λ_{max}: 302 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Esomeprazole magnesium is supplied as a crystalline solid. A stock solution may be made by dissolving the esomeprazole magnesium in the solvent of choice. Esomeprazole magnesium is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of esomeprazole magnesium in these solvents is approximately 1, 20, and 25 mg/ml, respectively.

Esomeprazole magnesium is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, esomeprazole magnesium should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Esomeprazole magnesium has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Esomeprazole magnesium is a form of the gastric H^+/K^+-ATPase inhibitor esomeprazole (Item No. 17303) in a 2:1 complex with magnesium.[1] It reduces aceclofenac-induced ulcer area and lesion index in the stomach in a rat model of gastric ulcer induced by a non-steroidal anti-inflammatory drug (NSAID) when administered at a dose of 20 mg/kg.[2] Formulations containing esomeprazole magnesium have been used as proton pump inhibitors (PPIs) in the treatment of gastroesophageal reflux disease (GERD), *H. pylori* eradication, and hypersecretory conditions, as well as in the prevention of NSAID-associated gastric ulcers.

References

1. Olbe, L., Carlsson, E., and Lindberg, P. A proton-pump inhibitor expedition: The case histories of omeprazole and esomeprazole. *Nat. Rev. Drug Discov.* **2(2)**, 132-139 (2003).
2. Kim, T.H., Thapa, S.K., Lee, D.Y., *et al.* Pharmacokinetics and anti-gastric ulceration activity of oral administration of aceclofenac and esomeprazole in rats. *Pharmaceutics* **10(3)**, 152 (2018).

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