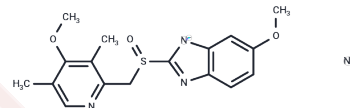


Omeprazole Sodium

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 95510-70-6 |
| Formula: | C17H18N3NaO3S |
| Molecular Weight: | 367.4 |
| Storage: | Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA. |



Biological Description

| | |
|----------------|--|
| Description | Omeprazole Sodium is a proton pump inhibitor (PPI) and suppresses gastric acid secretion. Omeprazole Sodium is a potent neutral sphingomyelinase (N-SMase) inhibitor (exosome inhibitor). Omeprazole Sodium shows competitive inhibition of CYP2C19 activity with a K_i of 2 to 6 μM . Omeprazole Sodium inhibits growth of Gram-positive and Gram-negative bacteria. |
| Targets (IC50) | Proton pump, Antibacterial, Autophagy, Cytochromes P450, Phospholipase |
| In vivo | Omeprazole Sodium virtually eliminated intragastric acidity in all patients: the median 24 hour intragastric pH rose from 1.4 to 5.3 and the mean hourly hydrogen ion activity fell from 38.50 to 1.95 mmol(mEq)/1 (p less than 0.001)[1] |

Solubility Information

| | |
|---------------------|--|
| Solubility | DMSO: 120 mg/mL (326.62 mM), Sonication is recommended. H2O: 5.5 mg/mL (14.97 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (10.89 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 2.7218 mL | 13.6091 mL | 27.2183 mL |
| 5 mM | 0.5444 mL | 2.7218 mL | 5.4437 mL |
| 10 mM | 0.2722 mL | 1.3609 mL | 2.7218 mL |
| 50 mM | 0.0544 mL | 0.2722 mL | 0.5444 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Jonkers D, et al. Omeprazole inhibits growth of gram-positive and gram-negative bacteria including *Helicobacter pylori* in vitro. *J Antimicrob Chemother.* 1996 Jan;37(1):145-50.

Huarui Zhang, et al. Advances in the discovery of exosome inhibitors in cancer. *J Enzyme Inhib Med Chem.* 2020 Dec;35(1):1322-1330.

Li XQ, et al. Comparison of inhibitory effects of the proton pump-inhibiting drugs omeprazole, esomeprazole, lansoprazole, pantoprazole, and rabeprazole on human cytochrome P450 activities. *Drug Metab Dispos.* 2004 Aug;32(8):821-7.

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