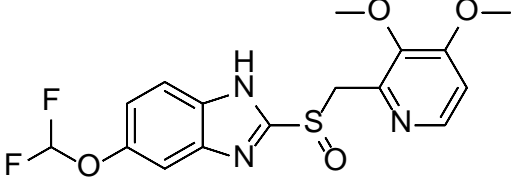


Product data sheet



MedKoo Cat#: 585064 Name: Pantoprazole CAS: 102625-70-7 Chemical Formula: C ₁₆ H ₁₅ F ₂ N ₃ O ₄ S Exact Mass: 383.0751 Molecular Weight: 383.3698	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years.	
In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Pantoprazole is a 2-pyridinylmethylsulfinylbenzimidazole proton pump inhibitor that is used in the treatment of gastroesophageal reflux and peptic ulcer.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	30.0	78.25
DMSO	53.0	138.25
DMSO:PBS (pH 7.2) (1:1)	0.5	1.30
Ethanol	40.5	105.64

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.61 mL	13.04 mL	26.08 mL
5 mM	0.52 mL	2.61 mL	5.22 mL
10 mM	0.26 mL	1.30 mL	2.61 mL
50 mM	0.05 mL	0.26 mL	0.52 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Zeng X, Liu L, Zheng M, Sun H, Xiao J, Lu T, Huang G, Chen P, Zhang J, Zhu F, Li H, Duan Q. Pantoprazole, an FDA-approved proton-pump inhibitor, suppresses colorectal cancer growth by targeting T-cell-originated protein kinase. *Oncotarget*. 2016 Apr 19;7(16):22460-73. doi: 10.18632/oncotarget.7984. PMID: 26967058; PMCID: PMC5008373.
- Shen Y, Chen M, Huang S, Zou X. Pantoprazole inhibits human gastric adenocarcinoma SGC-7901 cells by downregulating the expression of pyruvate kinase M2. *Oncol Lett*. 2016 Jan;11(1):717-722. doi: 10.3892/ol.2015.3912. Epub 2015 Nov 13. PMID: 26870273; PMCID: PMC4727057.

In vivo study

- Histing T, Stenger D, Scheuer C, Metzger W, Garcia P, Holstein JH, Klein M, Pohlemann T, Menger MD. Pantoprazole, a proton pump inhibitor, delays fracture healing in mice. *Calcif Tissue Int*. 2012 Jun;90(6):507-14. doi: 10.1007/s00223-012-9601-x. Epub 2012 Apr 24. PMID: 22527206.

Product data sheet



2. Takeuchi K, Konaka A, Nishijima M, Kato S, Yasuhiro T. Effects of pantoprazole, a novel H⁺/K⁺-ATPase inhibitor, on duodenal ulcerogenic and healing responses in rats: a comparative study with omeprazole and lansoprazole. J Gastroenterol Hepatol. 1999 Mar;14(3):251-7. doi: 10.1046/j.1440-1746.1999.01843.x. PMID: 10197495.

7. Bioactivity

Biological target:

Pantoprazole (BY10232) is an orally active and potent proton pump inhibitor (PPI).

In vitro activity

The present study investigated the effects of pantoprazole (PPZ) treatment and PKM2 transfection on human gastric adenocarcinoma SGC-7901 cells in vitro. The present study revealed that PPZ inhibited the proliferation of tumor cells, induced apoptosis and downregulated the expression of PKM2, which contributes to the current understanding of the functional association between PPZ and PKM2.

Reference: Oncol Lett. 2016 Jan;11(1):717-722. <https://pubmed.ncbi.nlm.nih.gov/26870273/>

In vivo activity

Pantoprazole (0.3-3 mg/kg, p.o.) as well as omeprazole (1-10 mg/kg, p.o.) and lansoprazole (1-10 mg/kg, p.o.) dose-dependently decreased both basal acid secretion in pylorus-ligated rats and the stimulated acid secretion induced by mepirizole in acute fistula rats, and the effects of pantoprazole were more potent than those of omeprazole and lansoprazole, the ED50 values for the stimulated acid secretion being 0.8, 2.0 and 1.2 mg/kg, respectively.

Reference: J Gastroenterol Hepatol. 1999 Mar;14(3):251-7. <https://pubmed.ncbi.nlm.nih.gov/10197495/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.