

PRODUCT INFORMATION



Rabeprazole Sulfide

Item No. 36276

CAS Registry No.: 117977-21-6

Formal Name: 2-[[[4-(3-methoxypropoxy)-3-methyl-2-pyridinyl]methyl]thio]-1H-benzimidazole

Synonym: Rabeprazole Thioether

MF: $C_{18}H_{21}N_3O_2S$

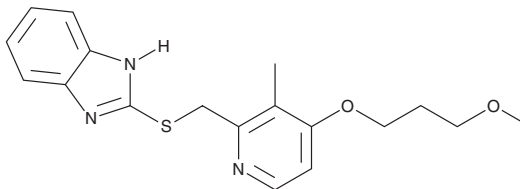
FW: 343.4

Purity: $\geq 98\%$

Supplied as: A 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

Rabeprazole sulfide is supplied as a solid. A stock solution may be made by dissolving the rabeprazole sulfide in the solvent of choice, which should be purged with an inert gas. Rabeprazole sulfide is soluble in the organic solvent dimethyl formamide at a concentration of approximately 1 mg/ml.

Description

Rabeprazole sulfide is an active metabolite of the proton pump inhibitor rabeprazole (Item No. 14939).¹ It inhibits the motility of *H. pylori* ($\text{IC}_{50} = 0.25 \mu\text{g/ml}$).² Rabeprazole sulfide is cytotoxic to HepG2 liver and PANC-1 pancreatic cancer cells ($\text{IC}_{50}\text{s} = 0.08$ and $0.17 \mu\text{M}$, respectively).³ It is also a potential impurity in commercial preparations of rabeprazole and an acid and neutral hydrolytic degradation product of rabeprazole.^{3,4}

References

1. Cao, N., Liu, L., Hao, Y.-B., *et al.* Simultaneous determination of rabeprazole enantiomers and their four metabolites after intravenous administration in beagle dogs by a stereoselective HPLC-MS/MS method and its application in pharmacokinetic studies. *Anal. Methods* **8**, 1405 (2016).
2. Tsutsui, N., Taneike, I., Ohara, T., *et al.* A novel action of the proton pump inhibitor rabeprazole and its thioether derivative against the motility of *Helicobacter pylori*. *Antimicrob. Agents Chemother.* **44(11)**, 3069-3073 (2000).
3. Bhandi, M.M., Borkar, R.M., Shankar, G., *et al.* Identification and characterization of stressed degradation products of rabeprazole using LC-ESI/MS/MS and ^1H -NMR experiments: *In vitro* toxicity evaluation of major degradation products. *RSC Adv.* **6**, 10719 (2016).
4. Reddy, G.M., Bhaskar, B.V., Reddy, P.P., *et al.* Identification and characterization of potential impurities of rabeprazole sodium. *J. Pharm. Biomed. Anal.* **43(4)**, 1262-1269 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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