

PRODUCT INFORMATION



Omeprazole sulfide-d₃

Item No. 40260

Formal Name: 6-methoxy-2-[[[4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]-1H-benzimidazole-d₃

Synonyms: OMEP sulfide-d₃, OMP sulfide-d₃, OMZ sulfide-d₃, Pyrimetazole-d₃, Ufiprazole-d₃

MF: C₁₇H₁₆D₃N₃O₂S

FW: 332.4

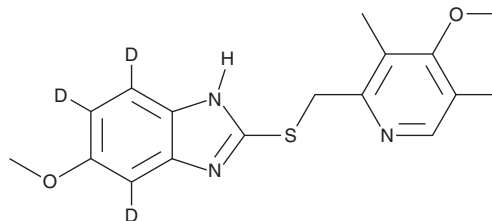
Chemical Purity: ≥98% (Omeprazole sulfide)

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

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

Omeprazole sulfide-d₃ is intended for use as an internal standard for the quantification of omeprazole sulfide (Item No. 18885) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Omeprazole sulfide-d₃ is supplied as a solid. A stock solution may be made by dissolving the omeprazole sulfide-d₃ in the solvent of choice, which should be purged with an inert gas. Omeprazole sulfide-d₃ is soluble in organic solvents such as acetonitrile and chloroform.

Description

Omeprazole sulfide is an active metabolite of the gastric H⁺/K⁺ ATPase inhibitor omeprazole (Item No. 14880).^{1,2} Omeprazole sulfide has been used as a precursor in the synthesis of the H⁺/K⁺ ATPase inhibitor esomeprazole (Item No. 17303).³ It is also a potential impurity in commercial preparations of omeprazole.⁴

References

- Hoffmann, K.J. Identification of the main urinary metabolites of omeprazole after an oral dose to rats and dogs. *Drug Metab. Dispos.* **14(3)**, 341-348 (1986).
- Ogilvie, B.W., Yerino, P., Kazmi, F., et al. The proton pump inhibitor, omeprazole, but not lansoprazole or pantoprazole, is a metabolism-dependent inhibitor of CYP2C19: Implications for coadministration with clopidogrel. *Drug Metab. Dispos.* **39(11)**, 2020-2033 (2011).
- Cotton, H., Elebring, T., Larsson, M., et al. Asymmetric synthesis of esomeprazole. *Tetrahedron Asymmetry* **11(18)**, 3819-3825 (2000).
- Iuga, C., Bojiță, M., and Leucuța, S.E. Development of a validated RP-HPLC method for separation and determination of process-related impurities of omeprazole in bulk drugs. *Farmacia* **57(5)**, 534-541 (2009).

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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