

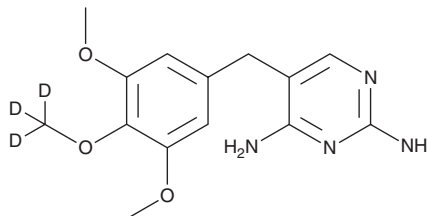
PRODUCT INFORMATION



Trimethoprim-d₃

Item No. 26119

CAS Registry No.: 1189923-38-3
Formal Name: 5-(3,5-dimethoxy-4-(methoxy-d₃)benzyl)pyrimidine-2,4-diamine
MF: C₁₄H₁₅D₃N₄O₃
FW: 293.3
Chemical Purity: ≥98% (Trimethoprim)
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

Trimethoprim-d₃ is intended for use as an internal standard for the quantification of trimethoprim (Item No. 16473) 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).

Trimethoprim-d₃ is supplied as a solid. A stock solution may be made by dissolving the trimethoprim-d₃ in the solvent of choice, which should be purged with an inert gas. Trimethoprim-d₃ is slightly soluble in DMSO and methanol.

Description

Trimethoprim is a synthetic antibiotic that inhibits dihydrofolate reductase (DHFR), which is necessary for the synthesis of purines, amino acids, and thymidylic acid.^{1,2} Trimethoprim shows prominent selectivity for bacterial DHFR over mammalian DHFR (IC₅₀s = 5 and 30,000 nM, respectively).² Formulations containing trimethoprim, commonly used in combination with sulfamethoxazole to minimize acquired resistance, have been used in the treatment of urinary tract infections.

References

1. Lam, T., Hilgers, M.T., Cunningham, M.L., *et al.* Structure-based design of new dihydrofolate reductase antibacterial agents: 7-(Benzimidazol-1-yl)-2,4-diaminoquinazolines. *J. Med. Chem.* **57**(3), 651-668 (2014).
2. Schweitzer, B.I., Dicker, A.P., and Bertino, J.R. Dihydrofolate reductase as a therapeutic target. *FASEB J.* **4**(8), 2441-2452 (1990).

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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