

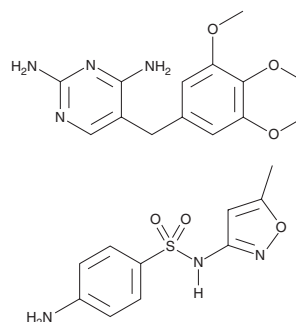
PRODUCT INFORMATION



Cotrimoxazole

Item No. 30781

CAS Registry No.: 8064-90-2
Formal Name: 5-[(3,4,5-trimethoxyphenyl)methyl]-2,4-pyrimidinediamine mixture with 4-amino-N-(5-methyl-3-isoxazolyl)-benzenesulfonamide
Synonyms: TMP-SMX, Trimethoprim-Sulfamethoxazole
MF: C₁₄H₁₈N₄O₃ • C₁₀H₁₁N₃O₃S
FW: 543.6
Purity: ≥98%
UV/Vis.: λ_{max}: 271 nm
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

Cotrimoxazole is supplied as a solid. A stock solution may be made by dissolving the cotrimoxazole in the solvent of choice, which should be purged with an inert gas. Cotrimoxazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of cotrimoxazole in ethanol is approximately 0.3 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Cotrimoxazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cotrimoxazole should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Cotrimoxazole has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cotrimoxazole is a mixture of the antibiotics sulfamethoxazole (Item No. 23613) and trimethoprim (Item No. 16473).^{1,2} It is bactericidal against 12 patient-derived community-acquired methicillin-resistant *S. aureus* (MRSA) strains when used at a concentration of 0.05 mg/L.² Cotrimoxazole (240 mg/kg) prevents lung and spleen bacterial colonization in a mouse model of inhaled *B. mallei* infection, but does not eradicate infection when administered post *B. mallei* exposure in the same model.³ It also resolves cutaneous tail lesions in a mouse model of *S. xylosum* infection.⁴ Formulations containing cotrimoxazole have been used in the treatment of MRSA infections and the prevention of glanders disease in human and veterinary medicine, respectively.

References

1. Lewis, E.L., Anderson, J.D., and Lacey, R.W. A reappraisal of the antibacterial action of cotrimoxazole *in vitro*. *J. Clin. Pathol.* **27(2)**, 87-91 (1974).
2. Kaka, A.S., Rueda, A.M., Shelburne, S.A., III, *et al.* Bactericidal activity of orally available agents against methicillin-resistant *Staphylococcus aureus*. *J. Antimicrob. Chemother.* **58(3)**, 680-683 (2006).
3. Barnes, K.B., Steward, J., Thwaite, J.E., *et al.* Trimethoprim/sulfamethoxazole (co-trimoxazole) prophylaxis is effective against acute murine inhalational melioidosis and glanders. *Int. J. Antimicrob. Agents* **41(6)**, 552-557 (2013).
4. Thornton, V.B., Davis, J.A., St. Clair, M.B., *et al.* Inoculation of *Staphylococcus xylosum* in SJL/J mice to determine pathogenicity. *Contemp. Top. Lab. Anim. Sci.* **42(4)**, 49-52 (2003).

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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