

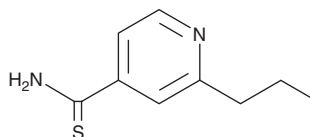
PRODUCT INFORMATION



Prothionamide

Item No. 16074

CAS Registry No.: 14222-60-7
Formal Name: 2-propyl-4-pyridinecarbothioamide
Synonym: Tebeform
MF: C₉H₁₂N₂S
FW: 180.3
Purity: ≥98%
UV/Vis.: λ_{max}: 289, 350 nm
Supplied as: A crystalline 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

Prothionamide is supplied as a crystalline solid. A stock solution may be made by dissolving the prothionamide in the solvent of choice, which should be purged with an inert gas. Prothionamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of prothionamide in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Prothionamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, prothionamide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Prothionamide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Prothionamide is a bactericidal thioamide effective against *M. tuberculosis* (MIC = ~0.5 µg/ml), *M. leprae* (MIC = 0.8-1.6 mg/L), and *M. avium*.¹ It forms a covalent adduct with nicotinamide adenine dinucleotide that inhibits mycobacterial InhA, the enoyl-acyl ACP reductase involved in mycolic acid biosynthesis, with a K_i value of 2 nM.¹

Reference

1. Wang, F., Langley, R., Gulten, R., *et al.* Mechanism of thioamide drug action against tuberculosis and leprosy. *J. Exp. Med.* **204**(1), 72-78 (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.

WARRANTY AND LIMITATION OF REMEDY

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