

## Product Data Sheet

Product Name: Thiocarlide

Cat. No.: GC45037

### Chemical Properties

Cas. No. 910-86-1

Chemical Name N,N'-bis[4-(3-methylbutoxy)phenyl]-thiourea

SMILES CC(C)CCOc1ccc(cc1)NC(=S)Nc1ccc(OCCC(C)C)cc1

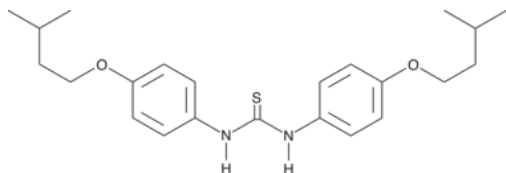
Formula C<sub>23</sub>H<sub>32</sub>N<sub>2</sub>O<sub>2</sub>S M.Wt 400.6

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, Ethanol: 1 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

Thiocarlide (isoxyl) is a thiourea derivative that was used in the 1960s to successfully treat tuberculosis (TB). It has considerable antimycobacterial activity in vitro and is effective against multi-drug resistant strains of Mycobacterium tuberculosis in the range of 1-10 µg/ml. [1] [2] At concentrations of 10 µM, isoxyl inhibits the synthesis of M. bovis during six hours of exposure which is similar to isoniazid (INH) and ethionamide (ETH), two other predominant anti-tuberculosis drugs. Unlike INH and ETH, isoxyl also partially inhibits the synthesis of fatty acids. Isoxyl shows no acute toxicity against primary macrophage cell cultures as demonstrated by diminution of redox activity. [2]

Reference:

[1]. Phetsuksiri, B., Jackson, M., Scherman, H., et al. Unique mechanism of action of the thiourea drug isoxyl on mycobacterium tuberculosis. The Journal of Biological Chemistry 278(52), 53123-

**Caution: Product has not been fully validated for medical applications. For research use only.**

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53130 (2003).

[2]. Phetsuksiri, B., Baulard, A.R., Cooper, A.M., et al. Antimycobacterial activities of isoxyl and new derivatives through the inhibition of mycolic acid synthesis. Antimicrobial Agents and Chemotherapy 43(5), 1042-1051 (1999).

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