
Product Data Sheet

Product Name: D,L-Buthionine-(S,R)-sulfoximine hydrochloride

Cat. No.: GC35795

Chemical Properties

Cas. No.

SMILES OC(C(N)CCS(CCCC)(=N)=O)=O.[H]Cl

Formula C8H19ClN2O3S

M.Wt 258.77

Solubility H₂O : 100 mg/mL (386.44 mM; Need ultrasonic) DMSO : < 1 mg/mL (insoluble or slightly soluble) Storage -20°C, sealed storage, away from moisture and light

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

D,L-Buthionine-(S,R)-sulfoximine is an inhibitor of γ -glutamylcysteine synthetase that induces 100% inhibition at a concentration of 10 μ M in an enzyme assay.¹ It is selective for γ -glutamylcysteine synthetase, lacking activity at glutamine synthetase at concentrations up to 500 μ M. D,L-Buthionine-(S,R)-sulfoximine (32 mmol/kg, i.p.) reduces renal glutathione in mice without inducing abnormal behavior or convulsions. It has antiparasitic activity, eliminating *T. brucei* from the bloodstream of infected mice *via* depletion of intratrypanosomal glutathione and induction of oxidative stress at a dose of 4 mmol/kg.² D,L-Buthionine-(S,R)-sulfoximine is an isomeric mixture of L-buthionine-S-sulfoxime, L-buthionine-R-sulfoxime, D-buthionine-S-sulfoxime, and D-buthionine-R-sulfoxime.

1.Griffith, O.W., and Meister, A.Potent and specific inhibition of glutathione synthesis by buthionine sulfoximine (S-n-butyl homocysteine sulfoximine). *Biol. Chem.*254(16)7558-7560(1979) 2.Arrick, B.A., Griffith, O.W., and Cerami, A.Inhibition of glutathione

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

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synthesis as a chemotherapeutic strategy for trypanosomiasis]. Exp. Med.153(3)720-725(1981)

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