

DL-Buthionine-(S,R)-sulfoximine hydrochloride

Chemical Properties

CAS No. :

Formula: C₈H₁₉ClN₂O₃S

Molecular Weight: 258.77

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	DL-Buthionine-(S,R)-sulfoximine hydrochloride (Buthionine sulfoximine hydrochloride) is a potent and specific inhibitor of glutamylcysteine synthetase biosynthesis.
Targets(IC50)	Others,Ferroptosis
In vitro	Buthionine sulfoximine is an analog of methionine sulfoximine that inhibits gamma-glutamylcysteine synthetase about 20 times more effectively than prothionine sulfoximine and at least 100 times more effectively than methionine sulfoximine [1].
In vivo	Treatment of mice bearing HT1080 and HT1080/DR4 xenografts with a continuous i.v infusion of nontoxic doses of D,L-Buthionine-(S,R)-sulfoximine (300 and 600 mg/kg/day) reduced GSH plasma levels by 60% and GSH tumor levels by over 95% in both parental and multidrug-resistant tumors. Combining D,L-Buthionine-(S,R)-sulfoximine with a maximum tolerated dose of doxorubicin administered 24 hours into a 48-hour i.v. infusion of D,L-Buthionine-(S,R)-sulfoximine fully restored the response of MRP-expressing HT1080/DR4 tumors to doxorubicin (overall response rate, 63%; complete response rate, 38%) without increasing host toxicity [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8644 mL	19.3222 mL	38.6444 mL
5 mM	0.7729 mL	3.8644 mL	7.7289 mL
10 mM	0.3864 mL	1.9322 mL	3.8644 mL
50 mM	0.0773 mL	0.3864 mL	0.7729 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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