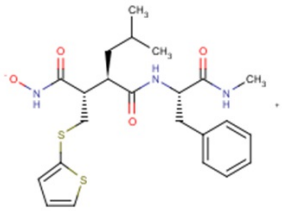
Data Sheet (Cat.No.T10461)

TargetMol
A DRUG SCREENING EXPERT

Batimastat sodium salt

Chemical Properties



CAS No.:	130464-84-5
Formula:	C23H30N3NaO4S2
Molecular Weight:	499.62
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Batimastat (BB-94) sodium salt is a broad-spectrum MMP inhibitor (IC50s: 3, 4, 4, 6, and 20 nM for MMP-1, MMP-2, MMP-9, MMP-7, and MMP-3).
Targets(IC_{50})	MMP-1: 3 nM MMP-2: 4 nM MMP-9: 4 nM MMP-7: 6 nM MMP-3: 20 nM
In vitro	Batimastat inhibits gelatinases A and B (IC50s: 4 nM and 10 nM). The IC50 with the structurally similar collagenase Ht-d is 6 nM, which is comparable with values for MMP-1 (3 nM), MMP-8 (10 nM), and MMP-3 (20 nM) [2]. CD30 shedding from the cell line Karpas299 can effectively be blocked by the hydroxamic acid-based metalloproteinase inhibitor Batimastat (IC50: 230 nM) [3].
In vivo	Matrix density is analyzed in saline- or Batimastat (40 mg/kg)-pretreated animals 4 h after E2 administration, the time point at which collagen density is observed to be at its lowest after hormone treatment [6]. Intraperitoneal administration of Batimastat effectively blocks the growth of human ovarian carcinoma xenografts and murine melanoma metastasis and delays the growth of primary tumors in an orthotopic model of human breast cancer without cytotoxicity and without affecting mRNA levels [2]. Batimastat has shown antineoplastic and antiangiogenic activity in various tumor models. Treatment with Batimastat (60 mg/kg i.p. every other day, for a total of eight injections) concomitantly with Cisplatin (4 mg/kg i.v., every 7 days for a total of three injections) completely prevents growth and spread of both xenografts, and all animals are alive and healthy on day 200[4]. Kaplan-Meier analysis of survival (at 48 h) shows that animals treated with Batimastat have increased survival (95.2%) in comparison with controls (75%), and differences are almost statistically significant (p=0.064) [5].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.002 mL	10.008 mL	20.015 mL
5 mM	0.4 mL	2.002 mL	4.003 mL
10 mM	0.2 mL	1.001 mL	2.002 mL
50 mM	0.04 mL	0.2 mL	0.4 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Yin Z, et al. Increased MMPs expression and decreased contraction in the rat myometrium during pregnancy and in response to prolonged stretch and sex hormones. Am J Physiol Endocrinol Metab. 2012 Jul 1;303(1):E55-70.
2. Botos I, et al. Batimastat, a potent matrix mealloproteinase inhibitor, exhibits an unexpected mode of binding. Proc Natl Acad Sci U S A. 1996 Apr 2;93(7):2749-54.
3. Hansen HP, et al. Inhibition of metalloproteinases enhances the internalization of anti-CD30 antibody Ki-3 and the cytotoxic activity of Ki-3 immunotoxin. Int J Cancer. 2002 Mar 10;98(2):210-5.
4. Giavazzi R, et al. Batimastat, a synthetic inhibitor of matrix metalloproteinases, potentiates the antitumor activity of cisplatin in ovarian carcinoma xenografts. Clin Cancer Res. 1998 Apr;4(4):985-92.
5. Ricci S, et al. Inhibition of matrix metalloproteinases attenuates brain damage in experimental meningococcal meningitis. BMC Infect Dis. 2014 Dec 31;14:726.

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