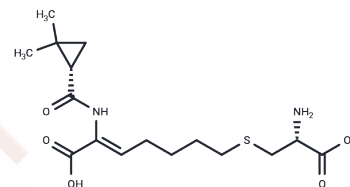


Cilastatin

Chemical Properties

CAS No. :	82009-34-5
Formula:	C ₁₆ H ₂₆ N ₂ O ₅ S
Molecular Weight:	358.45
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	Cilastatin (MK0791) is a renal dehydropeptidase-I and leukotriene D4 dipeptidase inhibitor. Since the antibiotic, IMIPENEM, is hydrolyzed by dehydropeptidase-I, which resides in the brush border of the renal tubule, cilastatin is administered with imipenem to increase its effectiveness. The drug also inhibits the metabolism of leukotriene D4 to leukotriene E4.
Targets(IC50)	Proteasome, Antibacterial, Antibiotic

Solubility Information

Solubility	DMSO: 250 mg/mL (697.45 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (27.9 mM), Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.58 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7898 mL	13.9489 mL	27.8979 mL
5 mM	0.558 mL	2.7898 mL	5.5796 mL
10 mM	0.279 mL	1.3949 mL	2.7898 mL
50 mM	0.0558 mL	0.279 mL	0.558 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.

Reference

Farrell CA, et al. Arch Biochem Biophys. 1987 Jul;256(1):253-9.

Huo X, Meng Q, Wang C, et al. Protective effect of cilastatin against diclofenac-induced nephrotoxicity in mice through interaction with diclofenac acyl glucuronide via OATs. British Journal of Pharmacology. 2020, 177(9): 1933-1948.

Huo X, Meng Q, Wang C, et al. Protective effect of cilastatin against diclofenac-induced nephrotoxicity in mice through interaction with diclofenac acyl glucuronide via OATs[J]. British Journal of Pharmacology. 2020, 177(9): 1933-1948.

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