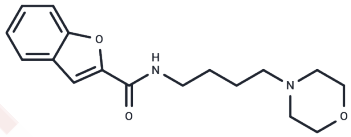
Data Sheet (Cat.No.T14978)

TargetMol

CL-82198

Chemical Properties



CAS No. : 307002-71-7

Formula: C17H22N2O3

Molecular Weight: 302.37

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	CL-82198, a selective MMP-13 inhibitor, serves as a pharmacological intervention to halt the progression of osteoarthritis (OA). Its mechanism of action involves binding to the S1' pocket of MMP-13, ensuring its selectivity and preventing inhibition of other MMPs.
Targets(IC50)	MMP
In vitro	CL-82198 decreases CTGF and TGF-β1 protein levels in hepatic stellate cells[3]. CL-82198 (10 μM; 24 hours) obviously reduces LS174 cell migration[1].
In vivo	CL82198 (1-10 mg/kg; i.p.; every other day for 12 weeks) treatment avoids and decelerates MLI-induced osteoarthritis progression.

Solubility Information

Solubility	DMSO: 100 mg/mL (330.72 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (13.23 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3072 mL	16.536 mL	33.0721 mL
5 mM	0.6614 mL	3.3072 mL	6.6144 mL
10 mM	0.3307 mL	1.6536 mL	3.3072 mL
50 mM	0.0661 mL	0.3307 mL	0.6614 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

Rath T et al. Matrix metalloproteinase-13 is regulated by toll-like receptor-9 in colorectal cancer cells and mediates cellular migration. Oncol Lett. 2011 May;2(3):483-488.
George J, et al. MMP-13 deletion decreases profibrogenic molecules and attenuates N-nitrosodimethylamine-induced liver injury and fibrosis in mice. J Cell Mol Med. 2017 Dec;21(12):3821-3835.
Wohlauer M et al. Nebulized hypertonic saline attenuates acute lung injury following trauma and hemorrhagic shock via inhibition of matrix metalloproteinase-13. Crit Care Med. 2012 Sep;40(9):2647-53.
Wang M,et al. MMP13 is a critical target gene during the progression of osteoarthritis. Arthritis Res Ther. 2013 Jan 8;15(1):R5.

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