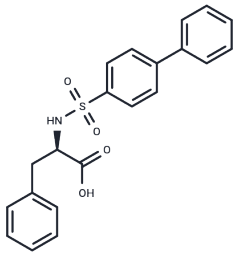
Data Sheet (Cat.No.T21512)

TargetMol

MMP-2/MMP-9 Inhibitor I

Chemical Properties



CAS No. : 193807-58-8

Formula: C21H19NO4S

Molecular Weight: 381.44

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	MMP-2/MMP-9-IN-1 is a potent, highly selective, and orally bioavailable inhibitor of type IV collagenases [MMP-9 and MMP-2], exhibiting IC50 values of 0.24 μM for MMP-9 and 0.31 μM for MMP-2, which can be used to study cancer.
Targets(IC50)	MMP
In vitro	MMP-2/MMP-9 inhibitor I was identified as a potent inhibitor of matrix metalloproteinase-2 (MMP-2) and MMP-9 with IC50 values of 310 and 240 nM, respectively. MMP-2/MMP-9 inhibitor I acted by binding zinc at the active site of these MMPs. MMP-2/MMP-9 inhibitor I was found to be able to block MMP-2/MMP-9-dependent invasion in cell culture model.[1]
In vivo	Both hydroxamic acid and carboxylic acid analogs of MMP-2/MMP-9 inhibitor I were evaluated for their inhibitory activities in animal cancer models. Results showed that lung colonization of Lewis lung carcinoma cells was suppressed by these inhibitors significantly. In addition, antitumor activity was also observed in the human lung cancer model. Ma44 cells growed as a solid tumor on the peritoneum after being implanted ip, and mice bearing Ma44 eventually died within 3 to 4 weeks. Daily oral administration of compound 5l led to prolonged survival of Ma44-bearing mice.[1]

Solubility Information

Solubility	DMSO: 250 mg/mL (655.41 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 (10.49 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	2.6216 mL	13.1082 mL	26.2164 mL
5 mM	0.5243 mL	2.6216 mL	5.2433 mL
10 mM	0.2622 mL	1.3108 mL	2.6216 mL
50 mM	0.0524 mL	0.2622 mL	0.5243 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

Tamura Y, et al. Highly selective and orally active inhibitors of type IV collagenase (MMP-9 and MMP-2): N-sulfonylamino acid derivatives. J Med Chem. 1998;41(4):640-649.