Data Sheet (Cat.No.T17201)

TargetMol

UK 356618

Chemical Properties

CAS No. :	230961-08-7
Formula:	C34H43N3O4
Molecular Weight:	557.72
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	UK 356618 is a potent and selective matrix metalloproteinase 3 (MMP-3) inhibitor with an IC50 of 5.9 nM. Its inhibitory activities against MMP-1, MMP-2, MMP-9, MMP-13 and MMP-14 are all weaker than that against MMP-3.
Targets(IC50)	MMP
In vitro	Methods: In vitro cell experiments and molecular interaction studies were performed to explore the effects of substituent size on MMP-3 inhibitory activity and MMP-2 selectivity, as well as the pharmacological characteristics of UK 356618 against MMPs and its effect on TNF-α-induced lung cancer cell migration. Results: : 1.The inhibitory activity against MMP-3 and the selectivity for matrix metalloproteinase 2 (MMP-2) were highly sensitive to substituent size, among which methyl substitution showed the optimal effect (corresponding compound UK 356618). Compared with other matrix metalloproteinases (MMPs), UK 356618 exhibited a broader spectrum of action [1]. 2.MMP-13 is closely associated with tumor metastasis-related interleukin-6 (IL-6) and tumor necrosis factor-α (TNF-α). MMP-13 knockout abolished the promotive effect of TNF-α on lung cancer cell migration, and treatment with UK 356618 also effectively blocked the migration of NCI-H446 lung cancer cells induced by TNF-α [2].
In vivo	Methods: Male Wistar rats were intravenously administered UK 356618 at a dose of 15 mg/kg. Reperfusion was performed at 24 hours and 7 days after administration, and the effect on MMP3 activity in the rat brain was detected. Results: After intravenous injection of UK 356618 at 15 mg/kg followed by reperfusion at 24 hours and 7 days respectively, MMP3 activity in the brain of male Wistar rats was significantly reduced [3].

Solubility Information

Solubility	DMSO: 20 mg/mL (35.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.793 mL	8.9651 mL	17.9301 mL
5 mM	0.3586 mL	1.793 mL	3.586 mL
10 mM	0.1793 mL	0.8965 mL	1.793 mL
50 mM	0.0359 mL	0.1793 mL	0.3586 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

Fray MJ, et al. Discovery of potent and selective succinyl hydroxamate inhibitors of matrix metalloprotease-3 (stromelysin-1). Bioorg Med Chem Lett. 2001 Feb 26;11(4):571-4.

Yan HQ, et al. Ataxia-telangiectasia mutated activation mediates tumor necrosis factor-alpha induced MMP-13 up-regulation and metastasis in lung cancer cells. Oncotarget. 2016 Sep 20;7(38):62070-62083.

Hafez S, et al. Matrix Metalloprotease 3 Exacerbates Hemorrhagic Transformation and Worsens Functional Outcomes in Hyperglycemic Stroke. Stroke. 2016 Mar;47(3):843-51.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481