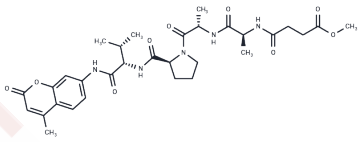
Data Sheet (Cat.No.T38364)

TargetMol

MeOSuc-AAPV-AMC

Chemical Properties



CAS No. : 72252-90-5

Formula: C31H41N5O9

Molecular Weight: 627.69

Storage: Keep away from direct sunlight,Keep away from moisture
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	MeOSuc-AAPV-AMC (MeOSuc-Ala-Ala-Pro-Val-AMC) is a tetrapeptide that is a fluorescent substrate for human leukocyte and porcine pancreatic elastase.
Targets(IC50)	Others
Cell Research	1. Measurement of enzyme activity Experimental steps: 1. Prepare the substrate solution: Dissolve MeOSuc-AAPV-AMC in an appropriate solvent (such as DMSO or water) and prepare the substrate solution at the desired concentration (usually 10-400 μM). 2. Reaction with elastase: Mix the substrate solution with elastase containing the appropriate concentration (human leukocyte elastase or porcine pancreatic elastase). 3. Incubate: Incubate the reaction mixture at 37°C for 30-60 minutes, allowing elastase to cleave the tetrapeptide substrate and release the AMC fluorophore. 4. Fluorescence measurement: Use a fluorescence spectrophotometer or microplate reader to measure the released fluorescence signal, the excitation wavelength is 360 nm and the emission wavelength is 460 nm. The fluorescence intensity is proportional to the activity of elastase. 2. Research on elastase inhibition Experimental steps: 1. Prepare the substrate and enzyme mixture: Mix the MeOSuc-AAPV-AMC substrate with elastase and inhibitor. 2. Incubate: Incubate the mixture at appropriate temperature. 3. Fluorescence measurement: After incubation, measure the fluorescence signal and observe the inhibitory effect of the inhibitor on elastase activity. III. Application in biological samples Experimental steps: 1. Prepare samples: In some studies, biological samples (such as plasma, tissue extracts) need to be prepared to detect elastase activity. 2. Reaction with MeOSuc-AAPV-AMC: Mix the prepared samples with the substrate and incubate. 3. Fluorescence analysis: Through fluorescence analysis, the activity of elastase in the sample is evaluated.

Cell Research	The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMF: 20 mg/mL (31.86 mM),Sonication is recommended. DMSO: 100 mg/mL (159.31 mM),Sonication is recommended. DMF:PBS(pH 7.2)(1:1): 0.5 mg/mL (0.8 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5931 mL	7.9657 mL	15.9314 mL
5 mM	0.3186 mL	1.5931 mL	3.1863 mL
10 mM	0.1593 mL	0.7966 mL	1.5931 mL
50 mM	0.0319 mL	0.1593 mL	0.3186 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

Dmitri Ivanov, et al. A serpin from the gut bacterium Bifidobacterium longum inhibits eukaryotic elastase-like serine proteases. J Biol Chem. 2006 Jun 23;281(25):17246-17252.