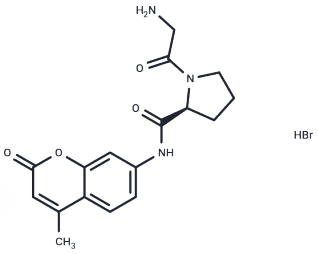
Data Sheet (Cat.No.T78410)

TargetMol

Gly-Pro-AMC hydrobromide

Chemical Properties



CAS No. : 115035-46-6

Formula: C17H20BrN3O4

Molecular Weight: 410.26

Storage: Store at low temperature,Keep away from moisture,
Keep away from direct sunlight
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	Gly-Pro-AMC hydrobromide (Gly-Pro-AMC HCl) is a specific fluorescent dye used in cytofluorescence assays to detect Dipeptidyl peptidase IV (DPP-IV) activity.
Targets(IC50)	Others
In vitro	Gly-Pro-AMC hydrobromide, at a concentration of 50 μM and under incubation conditions of 20 minutes at 37 °C, serves as a specific fluorescent substrate for the detection of DPP-IV activity[2].The fluorescence properties of Gly-Pro-AMC hydrobromide can be detected under the following conditions: excitation wavelength at 350 nm and fluorescence emission spectrum detection at 450 nm[2].
Kinase Assay	Determination of DPP-4 enzyme activity in cell lysate a. Solution preparation: In a light-proof environment, dissolve Gly-Pro-AMC hydrobromide powder with DMSO to obtain a 25 mmol/L concentrated stock solution, and dilute it to 500 μmol/L with buffer for use. Similarly, dissolve the fluorescent standard AMC powder with DMSO to obtain a 25 mmol/L concentrated stock solution, and dilute it to 160, 80, 40 and 20 μmol/L with buffer for use. b. Operation steps: 1. Add PBS to the cells in good culture state and scrape them with a scraper to collect them into a sterile EP tube, centrifuge at 4 ℃ and 200 g for 5 min, discard the supernatant, and add 3 mL 50 mmol/L Tris-HCl buffer to resuspend the cells. 2. Add 125 μL of the above-prepared AMC standard solution of different concentrations to each well of the 96-well plate on ice, and then add 10, 20, 30, 40 and 50 μL of cell lysate to the remaining test wells, and fill the volume to 75 μL with buffer. Finally, add 50 μL of 500 μmol/L Gly-Pro-AMC hydrobromide substrate solution to each test well to make the total volume of the system 125 μL. 3. Place the 96-well plate in a multifunctional microplate reader preheated to 37 ℃ to start the reaction, and immediately measure the relative fluorescence unit excitation wavelength (λex=380 nm, emission wavelength λem=460 nm) of each well; measure every 5 minutes in the following 30 minutes. 4. Calculate the enzyme specific activity based on the standard curve of the measurement results. The above information is based on published literature. Experimental procedures

Kinase Assay	should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 50 mg/mL (121.87 mM),Sonication is recommended. DMSO: 50 mg/mL (121.87 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: 5 mg/mL (12.19 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	2.4375 mL	12.1874 mL	24.3748 mL
5 mM	0.4875 mL	2.4375 mL	4.875 mL
10 mM	0.2437 mL	1.2187 mL	2.4375 mL
50 mM	0.0487 mL	0.2437 mL	0.4875 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

SUN Zhong-kan, et al.Establishment of DPP- 4 Inhibitors Screening Model Based on Caco-2 Cell Lysate.School of Life Science and Technology,China Pharmaceutical University.Nanjing BenQ Hospital Endocrine Department. 2023,30(05):459-463.

Lammi C, et al. Soybean- and Lupin-Derived Peptides Inhibit DPP-IV Activity on In Situ Human Intestinal Caco-2 Cells and Ex Vivo Human Serum. Nutrients. 2018 Aug 13;10(8):1082.