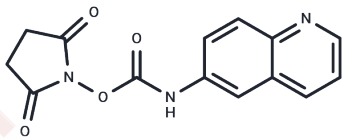
Data Sheet (Cat.No.TD0101)

TargetMol

AQC

Chemical Properties



CAS No. : 148757-94-2

Formula: C14H11N3O4

Molecular Weight: 285.25

Storage: Keep away from direct sunlight,Store under nitrogen
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	AQC (6-Aminoquinolyl-N-hydroxysccinimidyl carbamate) is a reagent used in HPLC for the fluorescence detection of amino acid or protein sequences. It reacts with primary and secondary amino acids to produce fluorescent derivatives, enabling the detection of amino acids at picomolar levels.
Targets(IC50)	Others
In vitro	Instructions 1. Solvent selection: AQC is dissolved in an organic solvent, such as anhydrous dimethyl sulfoxide (DMSO) or acetonitrile, and a solution with a concentration of 1-10 mM is usually used. The concentration needs to be adjusted according to the experimental requirements before use. 2. Reaction steps: a. Mix the amino acid or protein sample to be detected with the AQC solution. b. The reaction is usually carried out in a buffer solution of about pH 8.0, the reaction temperature is generally room temperature, and the time is 10-30 minutes. c. After the reaction is completed, the sample can be used for high-performance liquid chromatography (HPLC) analysis. 3. Detection and analysis: AQC derivatives have specific fluorescent properties, with an excitation wavelength of usually 250-350 nm and an emission wavelength of 395-400 nm. HPLC can be used with a fluorescence detector for separation and quantitative analysis to detect the concentration and sequence information of amino acids or proteins. Notes: 1) AQC reagents may be sensitive to moisture, so they need to be stored in a dry environment. 2) It is necessary to ensure that the reaction conditions are properly controlled to avoid sample loss or side reactions. 3) The product after the reaction needs to be analyzed by HPLC to remove unreacted AQC. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 95 mg/mL (333.04 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: 3.3 mg/mL (11.57 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	3.5057 mL	17.5285 mL	35.057 mL
5 mM	0.7011 mL	3.5057 mL	7.0114 mL
10 mM	0.3506 mL	1.7528 mL	3.5057 mL
50 mM	0.0701 mL	0.3506 mL	0.7011 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

Li L,et al. Quality control of pollen products in the market by quantitative analysis of total amino acids with liquid chromatography. Heliyon. 2024 Aug 6;10(16):e35833.

Yu Z, Li H, Jia Y Y, et al. Ratiometric co-delivery of doxorubicin and docetaxel by covalently conjugating with mPEG-poly (β-malic acid) for enhanced synergistic breast tumor therapy. Polymer Chemistry. 2020, 11(46): 7330-7339

Applications of amino acid derivatization with 6-aminoquinolyl-N-hydroxysuccinimidyl carbamate. Analysis of feed grains, intravenous solutions and glycoproteins.[J]. Journal of Chromatography A, 1994, 661(1-2):25-34.

Qu C, et al. A rapid UHPLC-QDa method for quantification of human salivary amino acid profiles. J Chromatogr B Analyt Technol Biomed Life Sci. 2022 Nov 15;1211:123485.