

DEAC, SE

Chemical Properties

CAS No. : 139346-57-9

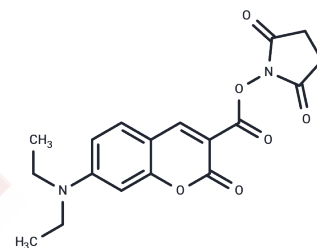
Formula: C₁₈H₁₈N₂O₆

Molecular Weight: 358.35

Keep away from direct sunlight

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	DEAC, SE can be used for relevant research in the field of life sciences. Its product number is T64949 and CAS number is 139346-57-9.
Targets(IC50)	Others
In vitro	<p>Instructions</p> <ol style="list-style-type: none"> Select solvents DEAC, SE are usually lipophilic molecules, dissolved in anhydrous DMSO or DMF. Note: Ensure that the solvent is anhydrous to avoid premature hydrolysis of the SE group. Sample preparation The biomolecules to be labeled (such as proteins, oligonucleotides) need to be dissolved in an appropriate buffer (such as phosphate buffer at pH 8.3). Note: The protein must contain free amine groups (such as N-terminus or lysine side chains) for coupling. Coupling reaction <ol style="list-style-type: none"> Slowly add DEAC, SE DMSO solution to the solution (usually 10 times the sample concentration). React at room temperature or slightly below room temperature (4°C) for 1-2 hours, avoiding light. Regulate the pH between 8-9 to ensure the activity of the N-carboximidoester (SE) group. Reaction termination and purification <ol style="list-style-type: none"> Use buffer to adjust the reaction pH to neutral (7.0) to prevent subsequent spontaneous degradation. Remove unbound DEAC, SE and byproducts by dialysis, gel filtration column (such as Sephadex G-25) or HPLC. Verify labeling Verify labeling efficiency using UV-visible spectrophotometer and fluorescence spectrophotometer. DEAC has a maximum absorption wavelength of ~426 nm; maximum emission wavelength of ~480 nm. <p>Notes</p> <ol style="list-style-type: none"> Storage conditions: DEAC, SE should be stored in a dry environment at -20°C, away from light and moisture.

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In vitro	2) Optimize the amount used: Adjust the amount of DEAC, SE used according to the characteristics of the target molecule (such as the lysine density of the protein). 3) Avoid cross-reaction: Ensure that there are no free amines in the sample that interfere with labeling. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.
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Solubility Information

Solubility	DMSO: 10 mg/mL (27.91 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7906 mL	13.9528 mL	27.9057 mL
5 mM	0.5581 mL	2.7906 mL	5.5811 mL
10 mM	0.2791 mL	1.3953 mL	2.7906 mL
50 mM	0.0558 mL	0.2791 mL	0.5581 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

Wang, L. et al., "Fluorescent Labeling of Proteins and Biomolecules: Advances and Applications", Chemical Reviews, 2017.

Piatek, A. et al., "Coumarin-Based Fluorescent Dyes for Biological Imaging", Molecules, 2018.

Terai, T., Nagano, T., "Small-molecule fluorophores and fluorescent probes for bioimaging", Current Opinion in Chemical Biology, 2008.

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