CY5-SE

Cat. No.: HY-D0819

CAS No.: 146368-14-1

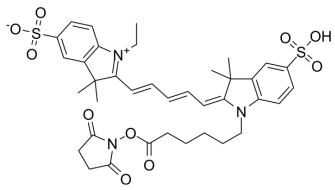
Molecular Formula: $C_{37}H_{43}N_3O_{10}S_2$

Molecular Weight: 753.88

Target: Fluorescent Dye

Pathway: Others

Storage: -20°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (33.16 mM; Need ultrasonic)

H_2O : ≥ 5.88 mg/mL (7.80 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.3265 mL	6.6324 mL	13.2647 mL
5 mM	0.2653 mL	1.3265 mL	2.6529 mL
10 mM	0.1326 mL	0.6632 mL	1.3265 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: Saline
   Solubility: 25 mg/mL (33.16 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (3.32 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.32 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Cy5-SE (Cy5 NHS Ester) is a reactive dye for the labeling of amino-groups in peptides, proteins, and oligonucleotides. This dye requires small amount of organic co-solvent (such as DMF or DMSO) to be used in labeling reaction. This reagent is ideal for very cost-efficient labeling of soluble proteins, as well as all kinds of peptides and oligonucleotides. This reagent also works well in organic solvents for small molecule labeling.Excitation (nm):649, Emission (nm): 670.

In Vitro

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified

according to your specific needs).
Conjugation of SELP Analogues with Cy5-SE.
1. 1 mL of each 100 μg/mL SELP solution in 100 mM sodium bicarbonate buffer (pH 8.3) is mixed with 10 μL of 1.2 mg/mL Cy5 mono NHS-ester in DMSO and incubates for 2 hours on ice.
2. To quench the reaction, 50 μL of 1 M Tris-HCl (pH 8.0) is added to the reaction solution.
3. Reaction mixtures are loaded onto 1.5 mL Sephadex G-25 columns, and Cy5-conjugated SELPs are eluted by centrifugation for 3 minutes at 1050g[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Adv Funct Mater. 2023 Sep 15.
- ACS Nano. 2024 Aug 14.
- Adv Sci (Weinh). 2023 Jun 25;e2301592.
- J Nanobiotechnology. 2024 Sep 19;22(1):578.
- J Nanobiotechnology. 2018 Mar 16;16(1):23.

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REFERENCES

[1]. Jeon HY, et al. Array-Based High-Throughput Analysis of Silk-Elastinlike Protein Polymer Degradation and C-Peptide Release by Proteases. Anal Chem. 2016;88(10):5398-5405.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA