

## CY5.5-COOH

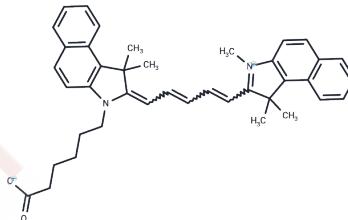
## Chemical Properties

CAS No. : 1449612-07-0

Formula: C40H42N2O2

Molecular Weight: 582.77

Appearance: Solid

Storage: keep away from moisture, store at low temperature  
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

## Biological Description

Description	CY5.5-COOH (Cyanine 5.5 carboxylic acid) is a fluorescent dye commonly used in biological imaging, cell imaging, protein localization, and immunostaining.
Targets(IC50)	Others
In vitro	<p>Fluorescent labeling of PP microplastics This experiment uses the CSD method to fluorescently label PP microplastics for biodistribution analysis.</p> <p>1. Solution preparation: Use DMSO to prepare CY5.5-COOH into a certain mother solution concentration and dilute it to 50 mg/mL for standby use. Note: The mother solution is stored at -80°C or -20°C, and the working solution is prepared and used immediately.</p> <p>2. Operation steps:</p> <ol style="list-style-type: none"> <li>1. Add 15g PP microplastics to 150 mL distilled water and 150 mL THF and stir for 10 minutes.</li> <li>2. Add the diluted working solution CY5.5-COOH (50 mg/mL) to the PP microplastic suspension and stir for 4 days.</li> <li>3. After the reaction is completed, use qualitative filter paper (2 to 3 µm) to vacuum filter and separate the Cy-PP microplastics to remove unlabeled CY5.5-COOH in the reaction suspension.</li> <li>4. Wash with distilled water and ethanol.</li> <li>5. Dry the Cy-PP microplastics in a dark place at 40°C.</li> <li>6. Analyze the morphology and chemical structure of Cy5.5 labeled PP using SEM and FT-IR spectroscopy, respectively. [1]</li> </ol>

## Solubility Information

Solubility	DMSO: 40 mg/mL (68.64 mM), Sonication is recommended. H2O: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7159 mL	8.5797 mL	17.1594 mL
5 mM	0.3432 mL	1.7159 mL	3.4319 mL
10 mM	0.1716 mL	0.858 mL	1.7159 mL
50 mM	0.0343 mL	0.1716 mL	0.3432 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.

Reference

Lee S, et al. Toxicity and Biodistribution of Fragmented Polypropylene Microplastics in ICR Mice. *Int J Mol Sci.* 2023 May 9;24(10):8463.

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