Product Data Sheet

Product Name: Cy5 carboxylic acid (non-sulfonated)
Cat. No.: GC12471

Chemical Properties

Cas. No.			
Chemical Name	6-[(2E)-3,3-dimethyl-2-[(2E,4E)-5-(1,3,3-trimethylindol-1-ium-2-yl)penta-2,4-dienylidene]indol-1-yl]hexanoic acid		
SMILES	CC1(C2=CC=CC=C2[N+](=C1C=CC=CC=C3C(C4=CC=CC=C4N3CCCCCC(=O)O)(C)C)C)C		
Formula	$C_{32}H_{39}ClN_2O_2$	M.Wt	519.12
Solubility	≥ 51.9mg/mL in DMSO, ≥ 89 mg/mL in EtOH	Storage	24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate.
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

Cy5 carboxylic acid is a non-activated carboxylic acid with low aqueous solubility. For coupling with amines, or protein labeling, Cy5 NHS ester and water-soluble sulfo-Cy5 NHS ester is preferred. This labeling dye has limited water solubility. For biomolecule labeling, the labeling reagent has low aqueous solubility, using of organic co-solvent to dissolve this molecular is necessary for efficient reaction. First, Cyanine dye should be dissolved in organic solvent and then added to a solution of biomolecule in appropriate aqueous buffer.

In the cells, The Cy5 carboxylic acid label on the dye can track the efficiency of the protein expression [1].

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Reference:
[1] Deyle, K. M.; Farrow, B.; Hee, Y.Q.; Work, J.; Wong, M.; Lai, B.; Umeda, A.; Millward, S.W.; Nag, A.; Das, S.; Heath, J.R. A protein-targeting strategy used to develop a selective inhibitor of the E17K point mutation in the PH domain of Akt1. Nature Chemistry,2015, 7, 455–462.

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