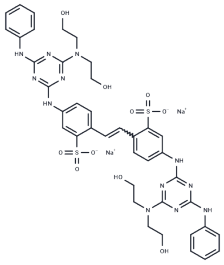
Data Sheet (Cat.No.T20231)

TargetMol

Cellufluor

Chemical Properties



CAS No. : 4193-55-9

Formula: C40H42N12Na2O10S2

Molecular Weight: 960.95

Storage: Keep away from direct sunlight
Store at -20°C
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cellufluor is a fluorescent whitening agent widely used in the textile and paper industries, as well as in biological research. It specifically binds to polysaccharides containing β-1,3 and β-1,4 glycosidic bonds (such as cellulose and chitin), producing strong fluorescence when excited by ultraviolet or short-wavelength visible light, and is used to visualize cell wall structures. In microbiology, Cellufluor enables rapid and sensitive detection of chitin and cellulose in the cell walls of fungi, algae, and plants. Due to the absence of cell wall polysaccharide structures, Cellufluor typically does not stain mammalian cells.
Targets(IC50)	Others
In vitro	Cellufluor (8.1% concentration) can stain the nuclei in pupal wing epithelial tissue with blue fluorescence [2]. Cellufluor-coated Fe_3O_4 nanoparticles exhibit a strong maximum fluorescence absorption peak (λmax) at 435 nm [4].

Solubility Information

Solubility	H2O: 40 mg/mL (41.63 mM),Sonication is recommended. DMSO: 120 mg/mL (124.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.0406 mL	5.2032 mL	10.4064 mL
5 mM	0.2081 mL	1.0406 mL	2.0813 mL
10 mM	0.1041 mL	0.5203 mL	1.0406 mL
50 mM	0.0208 mL	0.1041 mL	0.2081 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

Levene R, et al. The Enhancement of Fluorescence During Pad-Batch Whitening of Cotton Cloth 1[J]. Textile Research Journal, 1981, 51(9): 559-563.
Nakazato Y,et al. Live Detection of Intracellular Chitin in Butterfly Wing Epithelial Cells In Vivo Using Fluorescent Brightener 28: Implications for the Development of Scales and Color Patterns. Insects. 2023 Sep 8;14(9):753.
Tegafaw T, et al. Fluorescent brightener 28-coated Fe3O4 nanoparticles: synthesis, characterization, and fluorescent properties. Journal of Nanoscience and Nanotechnology, 2016, 16(10): 10986-10990.
Xiaoling Zuo, et al. Fluorescent Brighteners as Visible LED-Light Sensitive Photoinitiators for Free Radical Photopolymerizations. Macromol Rapid Commun. 2016 May;37(10):840-4.