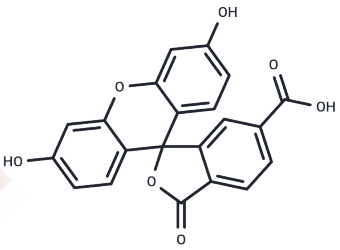
Data Sheet (Cat.No.T18902)

TargetMol

6-FAM

Chemical Properties



CAS No. : 3301-79-9

Formula: C21H12O7

Molecular Weight: 376.32

Storage: Keep away from direct sunlight,Keep away from moisture
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	6-Carboxyfluorescein (6-FAM) contains a carboxylic acid functional group, facilitating reactions with primary amines through carbodiimide activation.
Targets(IC50)	Others
In vitro	6-FAM labeled oligonucleotide probes for fluorescence in situ hybridization (FISH) I. Solution preparation: 1. Preparation of stock solution: Dissolve 6-FAM in DMSO or ethanol to prepare a 1-10 mM stock solution; (it is recommended to store at -20 ℃ or -80 ℃ in the dark after aliquoting) 2. Preparation of working solution: Dilute the 6-FAM stock solution with PBS or other suitable buffer, usually 1-10 μM; (Select the appropriate working solution concentration according to experimental requirements, and prepare it for immediate use) II. Operation steps: 1. Sample preparation: Prepare chromosome samples of chicken embryonic cells, including colchicine treatment, hypotonic swelling and methanol-glacial acetic acid fixation. 2. Pretreatment: Chromosomes are treated with RNase A, pepsin and formaldehyde. 3. Hybridization: 6-FAM labeled oligonucleotides were dissolved as probes in hybridization buffer (50% formamide, 2×SSC, 10% dextran sulfate) containing E. coli tRNA at a concentration of 20 ng/μL. After co-denaturation of DNA and probe, hybridization was performed overnight at room temperature in a humidified box; 4. Washing and counterstaining: After hybridization, the slides were washed three times in 2×SSC, dehydrated in a series of 70%-96% ethanol, and sealed with an antifade containing DAP I after drying; 5. Observation and analysis: The samples were observed using a Leica DM4000B fluorescence microscope equipped with a monochrome CCD camera DFC350FX and appropriate filters, and the chromosome color images were captured and processed using QFISH software. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 40 mg/mL (106.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 2 mg/mL (5.31 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6573 mL	13.2866 mL	26.5731 mL
5 mM	0.5315 mL	2.6573 mL	5.3146 mL
10 mM	0.2657 mL	1.3287 mL	2.6573 mL
50 mM	0.0531 mL	0.2657 mL	0.5315 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

Alexander Stepakov, et al. Modified Synthesis of 6-carboxyfluorescein (6-FAM): Application to Probe Labeling for Conventional Cytogenetics. British Journal of Applied Science & Technology. 7(4): 423-428, 2015, Article no.BJAST.2015.160.