5(6)-Carboxyfluorescein

Cat. No.: HY-15940

CAS No.: 72088-94-9

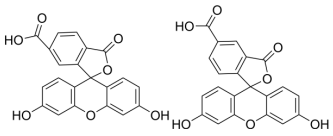
Molecular Formula: $C_{42}H_{24}O_{14}$

Molecular Weight: 752.63

Target: Fluorescent Dye

Pathway: Others

Storage: -20°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (83.04 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3287 mL	6.6434 mL	13.2867 mL
	5 mM	0.2657 mL	1.3287 mL	2.6573 mL
	10 mM	0.1329 mL	0.6643 mL	1.3287 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: 2.08 mg/mL (2.76 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

5(6)-Carboxyfluorescein (5(6)-FAM) is an amine-reactive pH-sensitive green fluorescent probe. 5(6)-Carboxyfluorescein (5(6)-FAM) can be used to label proteins, peptides and nucleotides. 5(6)-Carboxyfluorescein can be used for the detection of tumour areas in vivo[1][2].

In Vitro

5(6)-Carboxyfluorescein has two main characteristics: it has two wavelengths of maximum absorbance (465 and 490 nm) and its fluorescence emission (maximum, 515 nm) increases as a function of pH in the physiological pH range of 6-7.4[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

5(6)-Carboxyfluorescein (5 mg/kg; i.p.) can be used for in vivo pH mapping of tumor tissue[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	CDF mice, bearing lymphoid leukemia P388[2]

Dosage:	5 mg/kg
Administration:	Injected intraperitoneally
Result:	Could be used for measurement and imaging of tumor tissue.

CUSTOMER VALIDATION

- Nat Commun. 2023 Jul 17;14(1):4261.
- Hypertension. 2019 May;73(5):e25-e34.

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REFERENCES

[1]. Wen Ma, et al. A Cell Membrane-Targeting Self-Delivery Chimeric Peptide for Enhanced Photodynamic Therapy and In Situ Therapeutic Feedback. Adv Healthc Mater. 2020 Jan;9(1):e1901100.

[2]. Maksim V Kvach, et al. 5(6)-carboxyfluorescein revisited: new protecting group, separation of isomers, and their spectral properties on oligonucleotides. Bioconjug Chem. Sep-Oct 2007;18(5):1691-6.

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