Data Sheet (Cat.No.T212655)

TargetMol

FITC-Dextran (MW 150000)

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from direct sunlight
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	FITC-Dextran (MW 150000) is a fluorescein isothiocyanate (FITC)-labeled dextran fluorescent probe (Ex=491 nm; Em=518 nm). It can be used as a marker to detect heat shock-induced cell damage and study each stage of cell apoptosis. Additionally, it is applicable to animal perfusion experiments and fluorescent microlymphography for studying processes affecting blood-brain barrier (BBB) permeability, and can also serve as a fluorescent probe for cell permeability research.
Targets(IC50)	Others
In vitro	Cell Labeling Protocol This staining method can specifically label apoptotic HeLa cells and human peripheral blood mononuclear cells (PBMC), while normal viable cells of both types cannot be stained by FITC-Dextran (MW 150000). 1.Cells were first incubated at 43.5 ℃ for 1 h, then transferred to 37 ℃ and cultured for 8 h to establish the apoptosis model. 2.Tested cells were collected and resuspended in 100 μL culture medium, then transferred into a Q-prep centrifuge tube. Subsequently, 10 μL propidium iodide (PI) and 10 μL FITC-Dextran (MW 150000) with a molecular weight of 150000 were added sequentially. After mixing, the final concentration of PI in the system was 7.5 μM, and the final concentration of FITC-Dextran (MW 150000) was 1.13 μM. 3.Cells were incubated at room temperature away from light for 25 min to ensure sufficient staining and binding. 4.A total of 3 mL culture medium was added to the stained cell system for resuspension, followed by centrifugation at 500 g for 10 min to collect the cell pellet. 5.After discarding the supernatant, the harvested cells were resuspended in 1 mL culture medium and detected and analyzed by flow cytometry or fluorescence microscope. The excitation wavelength of PI is 500 nm and the emission wavelength is 600 nm; for FITC-Dextran (MW 150000) (molecular weight 150000), the excitation wavelength is 495 nm and the emission wavelength is 525 nm.
In vivo	Intestinal Barrier Function Detection 1.Experimental mice were fasted for 4 hours. 2.FITC-Dextran (MW 150000) was administered to mice by intragastric gavage at a dose of 0.6 mg/g. 3.The fluorescence level of samples was detected within 4 hours after administration,

In vivo	and the excitation and emission wavelengths were set (emission wavelength: 520 nm) to complete the detection of intestinal barrier permeability.

Solubility Information

Solubility	H2O: 53.34 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

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Okabayashi K, et al. Cdc42 activates paracellular transport in polarised submandibular gland cells. Arch Oral Biol. 2021 Dec;132:105276.
Yu W, et al. ACE2 contributes to the maintenance of mouse epithelial barrier function. Biochem Biophys Res Commun. 2020 Dec 17;533(4):1276-1282.
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Ishii T, et al., Accumulation of macromolecules in brain parenchyma in acute phase of cerebral infarction/reperfusion. Brain Res. 2010 Mar 19;1321:164-8.