Data Sheet (Cat.No.T212699)

TargetMol

FITC-Dextran (MW 3000-5000)

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 3000-5000) is a fluorescein isothiocyanate (FITC) dextran fluorescent probe with excitation at 495 nm and emission at 525 nm. It serves as a marker to reveal cell damage caused by heat shock and to study early and late stages of apoptosis. Additionally, FITC-Dextran (MW 3000-5000) is used in research on cell permeability, including blood-brain barrier permeability and the extent of its disruption. Store protected from light.
Targets(IC50)	Others
In vitro	Cell Marker: This method is suitable for identifying apoptotic HeLa cells and human peripheral blood mononuclear cells (PBMC), as live HeLa and PBMC do not take up FITC-Dextran. First, incubate the cells at 43.5°C for 1 hour, followed by 37°C for 8 hours to induce apoptosis. Suspend cells in 100 μL of medium and mix with 10 μL of propidium iodide (PI) and 10 μL of FITC-Dextran (MW 3000-5000), achieving final concentrations of 7.5 μM and 1.13 μM, respectively. Incubate the cells in the dark at room temperature for 25 minutes. Centrifuge the labeled cells in 3 mL of medium at 500 g for 10 minutes. Resuspend the pelleted cells in 1 mL of medium and analyze using flow cytometry or fluorescence microscopy (PI: Ex=500 nm, Em=600 nm; FITC-Dextran (MW 3000-5000): Ex=495 nm, Em=525 nm). Paracellular Permeability Detection [4]: Introduce FITC-Dextran (0.1 mg/mL) into the basal medium of a transwell chamber. After 15 minutes, collect the medium from the transwell inserts and measure the fluorescence signal (Ex=485 nm, Em=538 nm). Determine the FITC-Dextran concentration based on fluorescence intensity and calculate permeability.
In vivo	To assess intestinal barrier function, mice undergo a 4-hour fasting period. Subsequently, FITC-Dextran (MW 3000-5000) is administered intragastrically at a dose of 0.6 mg/g. Fluorescence intensity is then measured within 4 hours (Ex nm/Em 520 nm).

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