FITC-Dextran (MW 150000)

Cat. No.: HY-128868G

CAS No.: 60842-46-8

Target: Fluorescent Dye

Pathway: Others

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)

FITC-Dextran (MW 150000)

SOLVENT & SOLUBILITY

In Vitro	H_2O : 66.67 mg/mL (Need ultrasonic)

BIOLOGICAL ACTIVITY

Description	FITC-Dextran (MW 150000) is a fluorescent probe for fluorescein isothiocyanate (FITC) dextran (Ex=491 nm; Em=518 nm). FITC-Dextran (MW 150000) can be used as a marker to reveal heat shock-induced cell damage and to study the early and late stages of apoptosis. FITC-Dextran (MW 150000) can be used in perfusion studies in animals or in fluorescence microlymphography, to study processes that affect the permeability of the blood brain barrier (BBB)[6]. FITC-Dextran (MW 150000) can be used as fluorescent probe to study cell permeability[7].
In Vitro	Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs). Labeling of cells[1]: For use with apoptotic HeLa cells and human peripheral blood mononuclear cells (PBMC) (viable HeLa and PBMC can not be stained by FITC-Dextran). 1. Incubate cells at 43.5°C for 1 hour and at 37°C for 8 hours to induce apoptosis. 2. Suspend the cells in 100 µL of medium, and mix in Q-prep tubes with 10 µL of propidium iodide (PI), 10 µL of FITC-Dextran (MW 150000) (the final concentration of PI and FITC-Dextran (MW 150000) is 7.5 µM and 1.13 µM, respectively). 3. Incubate cells for 25 min at room temperature in the dark. 4. Take the labeled cells with 3 mL of medium and centrifuge for 10 min at 500 g. 5. Take centrifuged cells with 1 mL of medium and use flow cytometry or fluorescence microscopy analyze (PI: Ex=500 nm, Em=600 nm; FITC-Dextran (MW 150000): Ex=495 nm, Em=525 nm). Paracellular permeability measurement[4] 1. Add FITC-dextran (0.1 mg/mL) to the basal media in the transwell chamber. 2. Collect media from the transwell insert after 15 min. 3. Measure the fluorescence signal (Ex=485 nm, Em=538 nm). 4. Calculate FITC-dextran concentration based on fluorescence intensity. 5. Calculate permeability.

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs). For intestinal barrier function assay[5] 1. Fast mice for 4 h. 2. Orally gavage mice with FITC-Dextran MW 150000 (0.6 mg/g). 3. Measure fluorescence intensity of plasma in 4 h (excitation nm/emission 520 nm). MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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[4]. Okabayashi K, et al. Cdc42 activates paracellular transport in polarised submandibular gland cells. Arch Oral Biol. 2021 Dec;132:105276.

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[6]. Bolliner A,et al.,Fluorescence microlymphography: diagnostic potential in lymphedema and basis for the measurement of lymphatic pressure and flow velocity. Lymphology. 2007 Jun;40(2):52-62.

[7]. 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.

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