FITC-Dextran (MW 2000000)

Cat. No.: HY-128868I

CAS No.: 60842-46-8

Target: Biochemical Assay Reagents

Pathway: Others

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

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SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (ultrasonic and warming and heat to 60°C) H_2O : 25 mg/mL (Need ultrasonic)
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	FITC-Dextran (MW 2000000) is a compound belonging to the class of fluorescent dyes. It is commonly used in biomedical research as a tracer molecule to label and track cells or other biological matter. FITC-Dextran consists of fluorescein isothiocyanate (FITC) and dextran, a complex carbohydrate derived from starch. The combination of the two creates a stable fluorescent tracer that can be viewed under a microscope or quantified using specialized detection instruments.
In Vitro	FITC-Dextran (MW 2000000) is a fluorescent probe for fluorescein isothiocyanate (FITC) dextran (Ex=495 nm; Em=525 nm). FITC-Dextran (MW 2000000) 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 2000000) can also be used for cell permeability studies, such as blood-brain barrier permeability and determination of the extent of blood-brain barrier disruption[1][2][3]. Storage: protect from light. 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 2000000 (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

[1]. Moumaris M, et al. Fluorescein isothiocyanate-dextran can track apoptosis and necrosis induced by heat shock of peripheral blood mononuclear cells and HeLa

cells[J]. Open Biological Sciences Journal, 2015, 1(1).

[2]. Natarajan R, et al. Fluorescein Isothiocyanate (FITC)-Dextran Extravasation as a Measure of Blood-Brain Barrier Permeability. Curr Protoc Neurosci. 2017 Apr 10;79:9.58.1-9.58.15.

[3]. Eriksson I, et al. Analysis of Lysosomal pH by Flow Cytometry Using FITC-Dextran Loaded Cells. Methods Mol Biol. 2017;1594:179-189.

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

[5]. 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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