

## FITC-Dextran (MW 500000)

<b>Cat. No.:</b>	HY-128868H		
<b>CAS No.:</b>	60842-46-8		
<b>Target:</b>	Biochemical Assay Reagents		
<b>Pathway:</b>	Others		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month

## FITC-Dextran (MW 500000)

### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 50 mg/mL (Need ultrasonic)
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### BIOLOGICAL ACTIVITY

**Description** FITC-Dextran (MW 500000) 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 500000) is a fluorescent probe for fluorescein isothiocyanate (FITC) dextran (Ex=495 nm; Em=525 nm). FITC-Dextran (MW 500000) 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 500000) can also be used for cell permeability studies, such as blood-brain barrier permeability and determination of the extent of blood-brain barrier disruption<sup>[1][2][3]</sup>. 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<sup>[5]</sup>

1. Fast mice for 4 h.
2. Orally gavage mice with FITC-Dextran MW 500000 (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.

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- [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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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA