

Dextran sulfate sodium salt (MW 36,000 - 50,000)

## Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: 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	Dextran sulfate sodium salt (MW 36,000-50,000) is a medium molecular weight polyanionic dextran derivative with strong intestinal epithelial permeability. It is the most commonly used agent for inducing inflammatory bowel disease (IBD) models, effectively inducing both acute and chronic colitis. Its mechanism may involve macrophage dysfunction and gut microbiota dysbiosis. Due to its colonic epithelial toxicity, long-term use can also induce colorectal cancer models.
Targets(IC50)	Others
In vivo	<b>Method:</b> To induce acute colitis, Dextran Sulfate Sodium Salt (MW 36,000-50,000) was administered via drinking water at a concentration of 2.8% (m/V) for 6 consecutive days (from day 0 to day 6). <b>Results:</b> Compared with the control group, mice in the DSS-induced colitis group exhibited severe clinical symptoms, including significant weight loss, increased DAI scores, and shortened colon length. H&E staining of colon tissue sections from the DSS group revealed inflammatory cell infiltration, goblet and epithelial cell loss, crypt abscesses, thickened and detached muscular layers, and a marked increase in ulcer formation. Additionally, histopathological analysis showed significant colonic tissue damage.

## Solubility Information

Solubility	H2O: 100 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

## Reference

Regmi S, et al. Enhanced viability and function of mesenchymal stromal cell spheroids is mediated via autophagy induction. *Autophagy*. 2021 Oct;17(10):2991-3010.

Baba M, et al. Mechanism of inhibitory effect of dextran sulfate and heparin on replication of human immunodeficiency virus in vitro. *Proc Natl Acad Sci U S A*. 1988 Aug;85(16):6132-6.

Li H, et al. Rhabdosis serra alleviates dextran sulfate sodium salt-induced colitis in mice through anti-inflammation, regulating Th17/Treg balance, maintaining intestinal barrier integrity, and modulating gut microbiota. *J Pharm Anal*. 2022 Dec;12(6):824-838.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481