

## Zymosan A

## Chemical Properties

CAS No. : 58856-93-2

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	Zymosan A, a polysaccharide derived from <i>Saccharomyces cerevisiae</i> , is a TLR2 agonist that can upregulate ASCL2 through the TLR2 and Wnt signaling pathways, promoting the regeneration of intestinal stem cells (ISCs) after radiation-induced injury. It exhibits significant radioprotective effects, helping to prevent and alleviate IR-induced intestinal damage. Additionally, Zymosan A can induce immune responses, inflammation, anorexia, and elevated body temperature, and is commonly used to establish peritonitis models.
Targets(IC50)	TLR
In vivo	<b>Methods:</b> Zymosan A (25.0 mg/Kg, intraperitoneal injection, 24 and 2 hours before IR) was given to mice to observe its effect on IR-induced intestinal damage in mice. <b>Results:</b> The radioprotective effect of Zymosan A was even better when it was given 24 and 2 hours before IR. Zymosan A had a significant radioprotective effect on irradiated mice, and Zymosan A alleviated IR-induced intestinal damage in mice. [1]

## Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble) DMSO: 1 mg/mL, when pH is adjusted to 4 with HCl. Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Reference

Du J, et al. Zymosan-A promotes the regeneration of intestinal stem cells by upregulating ASCL2. *Cell Death Dis.* 2022 Oct 20;13(10):884.

Monroe LL, et al. Zymosan-Induced Peritonitis: Effects on Cardiac Function, Temperature Regulation, Translocation of Bacteria, and Role of Dectin-1. *Shock.* 2016 Dec;46(6):723-730.

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Tel:781-999-4286

E\_mail:info@targetmol.com

Address:34 Washington Street,Wellesley Hills,MA 02481