



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Lipopolysaccharides

Cat. No.:	HY-D1056		
Target:	Toll-like Receptor (TLR)		
Pathway:	Immunology/Inflammation		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month

Lipopolysaccharides

SOLVENT & SOLUBILITY

In Vitro	DMSO : 14.29 mg/mL (ultrasonic and warming and heat to 60°C) H ₂ O : 5 mg/mL (Need ultrasonic)
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: PBS Solubility: 8.33 mg/mL (Infinity mM); Clear solution; Need ultrasonic and warming and heat to 60°C Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.43 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Lipopolysaccharides (LPS) is an endotoxin derived from the outer leaflet of the outer membrane of Gram-negative bacteria. Lipopolysaccharides consists of an antigen O-specific chain, a core oligosaccharide and lipid A. Lipopolysaccharides is a pathogenic associated molecular pattern (PAMP) that activates the immune system. Lipopolysaccharides activates TLR-4 on immune cells ^{[1][2][3]} . This product is derived from Escherichia coli O55:B5. Lipopolysaccharides induces secretion of cell migrasome ^[4] .
IC₅₀ & Target	TLR4
In Vitro	Lipopolysaccharides (10–80 μg/mL) selectively decreases THir (tyrosine hydroxylase immunoreactive) cells and increases culture media levels of interleukin1β (IL-1β) and tumor necrosis factor-α (TNF-α) as well as nitrite (an index of nitric oxide (NO) production) ^[5] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Lipopolysaccharides can be used in animal modeling to construct a mouse liver inflammation model. Lipopolysaccharides (1.5 mg/kg; i.p.; once) induces sickness and hypothermia in mice, and induces a greater and more prolonged sickness response in adult male mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female and male CD1 mice ^[3]
Dosage:	1.5mg/kg
Administration:	Intraperitoneal injection, once
Result:	<p>Induced sickness behavior in all mice, but adult mice displayed more sickness than pubertal mice and adult males remained sick for a longer period of time than adult females.</p> <p>Caused a decrease in body temperature for all mice, but this decrease was greatest in adult males.</p> <p>Increased pro- and anti-inflammatory cytokines at various levels in pubertal and adult male and female mice, resulted in age and sex differences in cytokine concentrations following immune challenge.</p> <p>Only adult males and females treated with LPS displayed significantly more IL-6 than their saline controls, and pubertal males and females and adult females displayed significantly more IL-10 than their saline controls.</p> <p>All the mice displayed significantly more IL-12 and TNF-α than their saline controls.</p>

CUSTOMER VALIDATION

- Cell Res. 2023 Jul 17.
- Immunity. 2024 Feb 16:S1074-7613(24)00044-X.
- Adv Mater. 2024 Feb 1:e2311964.
- Adv Mater. 2023 Jan 19:e2210787.
- Adv Funct Mater. 10 March 2022.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Cai KC, et al. Age and sex differences in immune response following LPS treatment in mice. *Brain Behav Immun*. 2016 Nov;58:327-337.
- [2]. Gayle DA, et al. Lipopolysaccharide (LPS)-induced dopamine cell loss in culture: roles of tumor necrosis factor- α , interleukin-1 β , and nitric oxide. *Brain Res Dev Brain Res*. 2002 Jan 31;133(1):27-35.
- [3]. Ying Liu, et al. Podocyte-Released Migrasomes in Urine Serve as an Indicator for Early Podocyte Injury. *Kidney Dis (Basel)*. 2020 Nov;6(6):422-433.
- [4]. Kabanov DS, et al. Structural analysis of lipopolysaccharides from Gram-negative bacteria. *Biochemistry (Mosc)*. 2010 Apr;75(4):383-404.
- [5]. Heinrichs DE, et al. Molecular basis for structural diversity in the core regions of the lipopolysaccharides of *Escherichia coli* and *Salmonella enterica*. *Mol Microbiol*. 1998 Oct;30(2):221-32.

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

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