

Product Data Sheet

Product Name: Lipopolysaccharides

Cat. No.: GC65924

Chemical Properties

Cas. No.

Formula

M.Wt

Solubility H₂O : 5 mg/mL (Need ultrasonic) Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Lipopolysaccharides

Background

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 (10-80 µg/mL) selectively decreases TH1r (tyrosine hydroxylase immunoreactive) cells and increases culture media levels of interleukin1β (IL-1β) and tumor necrosis

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

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factor- α (TNF- α) as well as nitrite (an index of nitric oxide (NO) production)^[4].

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].

Animal Model: Female and male CD1 mice^[3]

Dosage: 1.5mg/kg

Administration: Intraperitoneal injection, once

Result: 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. Caused a decrease in body temperature for all mice, but this decrease was greatest in adult males. 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. 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. All the mice displayed significantly more IL-12 and TNF- α than their saline controls.

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