Product Datasheet

LPS from E. Coli, TLR4 ligand

NBP2-25295

Unit Size: 10 mg

Store at -20C. Avoid freeze-thaw cycles.

Reviews: 1 Publications: 10

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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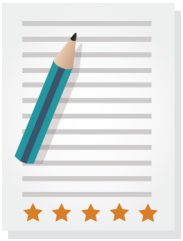
Updated 10/23/2024 v.20.1



NBP2-25295

LPS from E. Coli, TLR4 ligand

Product Information

Unit Size	10 mg
Concentration	Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Reconstitution Instructions	Reconstitute with 1 mL sterile balanced salt solution or tissue culture medium to the vial (1 mg) and gently swirl until the powder dissolves. Reconstituted product may be further diluted to desired working concentrations.
Purity	Ion exchange chromatography

Product Description

Description	This product is purified by Phenol extraction Appearance (Color): Clear to semi-yellow liquid Solubility (Solvent): Water Solubility (Conc): 4.90 - 5.10 mg/ml Solubility (Turbidity) :Faint Hazy to Hazy Solubility (Color) :Colorless to Light Yellow Protein Content (Method) :Lowry Prot. Content (% Protein): < 3.00 % Potency (Sample EU/mg): > 500000 EU/mg Lipopolysaccharide compounds are highly pyrogenic. Avoid inhalation of any LPS and prevent these compounds from entering the bloodstream
Immunogen	Lipopolysaccharides from Escherichia coli 0111:B4 Gamma-irradiated, BioXtra, suitable for cell culture
Notes	This product is purified by Phenol extraction Appearance (Color): Clear to semi-yellow liquid Solubility (Solvent): Water Solubility (Conc): 4.90 - 5.10 mg/ml Solubility (Turbidity) :Faint Hazy to Hazy Solubility (Color) :Colorless to Light Yellow Protein Content (Method) :Lowry Prot. Content (% Protein): < 3.00 % Potency (Sample EU/mg): > 500000 EU/mg Lipopolysaccharide compounds are highly pyrogenic. Avoid inhalation of any LPS and prevent these compounds from entering the bloodstream

Product Application Details

Applications	Functional
Recommended Dilutions	Functional
Application Notes	Lipopolysaccharides (LPSs) are characteristic components of the cell wall of Gram-negative bacteria. LPS and its lipid A moiety stimulate cells of the innate immune system by the Toll-like receptor 4 (TLR4), a member of the Toll-like receptor protein family, which recognizes common pathogen-associated molecular-patterns (PAMPs). Use in Functional reported in scientific literature (PMID: 26121241)

Publications

Liu Y, Diamond SL. Activation of Most Toll-Like Receptors in Whole Human Blood Attenuates Platelet Deposition on Collagen under Flow Journal of Immunology Research 2023-01-17 [PMID: 36703865]

H Asashima, S Mohanty, M Comi, WE Ruff, KB Hoehn, P Wong, J Klein, C Lucas, I Cohen, S Coffey, N Lele, L Greta, K Raddassi, O Chaudhary, A Unterman, B Emu, SH Kleinstein, RR Montgomery, A Iwasaki, CS Dela Cruz, N Kaminski, AC Shaw, DA Hafler, TS Sumida PD-1highCXCR5-CD4+ peripheral helper Tï¿½cells promote CXCR3+ plasmablasts in human acute viral infection Cell Reports, 2023-01-02;0(0):111895. 2023-01-02 [PMID: 36596303]

Zhang S, Yuan B, Lam JH et al. Structure of the full-length human Pannexin1 channel and insights into its role in pyroptosis Cell Discovery 2021-12-01 [PMID: 33947837]

Kettenburg G Developing a Model of H5N1 Influenza Pathogenesis in Precision-Cut Human Lung Slices Thesis 2020-01-01

Ishida Y, Ohta K, Naruse T et al. Candida albicans b-glucan-containing particles increase HO-1 expression in oral keratinocytes via ROS/p38MAPK/Nrf2 pathway Infect. Immun. 2018-01-08 [PMID: 29311246] (Func)

Kidana K, Tatebe T, Ito K et al. Loss of kallikrein-related peptidase 7 exacerbates amyloid pathology in Alzheimer's disease model mice EMBO Mol Med 2018-01-08 [PMID: 29311134] (Func)

Kuen J, Darowski D, Kluge T, Majety M. Pancreatic cancer cell/fibroblast co-culture induces M2 like macrophages that influence therapeutic response in a 3D model PLoS ONE 2017-07-27 [PMID: 28750018] (Func, Human)

Nakamura M, Kanda T, Sasaki R et al. MicroRNA-122 Inhibits the Production of Inflammatory Cytokines by Targeting the PKR Activator PACT in Human Hepatic Stellate Cells. PLoS ONE. 2015-12-05 [PMID: 26636761]

Details:
LPS from E. Coli, TLR4 ligand was used at 100 ng/mL concentration for the stimulation of hepatic stellate cells (LX-2 cells) and the stimulation treatment was done for 24 hours.

Uraki S, Tameda M, Sugimoto K et al. Substitution in Amino Acid 70 of Hepatitis C Virus Core Protein Changes the Adipokine Profile via Toll-Like Receptor 2/4 Signaling PLoS ONE. 2015-06-30 [PMID: 26121241] (Func)

Gillaux C, Mehats C, Vaiman D et al. Functional screening of TLRs in human amniotic epithelial cells. J Immunol. 2011-09-01 [PMID: 21775685]

Details:
TLR ligands: TLR1/2 (IMG-2201), TLR3 (IMG-2203), TLR4 (IMG-2204), TLR5 (IMG-2205), TLR6/2 (IMG-2206), TLR7 (IMG-2207), TLR9 (IMG-2209Hpt). The effects of ligand stimulation was measured by various readout assays, refer to the figures for details (Figs 2-8, S1).

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