

# PRODUCT INFORMATION



## LPS from *Escherichia coli* O111:B4

Item No. 19661

### Overview and Properties

<b>Contents:</b>	Each vial contains LPS isolated from <i>Escherichia coli</i> O111:B4, which was in water when lyophilized
<b>Storage:</b>	2-8°C (as supplied)
<b>Stability:</b>	≥2 years
<b>Special conditions:</b>	This product is pyrogenic. Avoid accidental autoinoculation by exercising extreme care when handling in conjunction with any injection device.

### Laboratory Procedures

LPS is dispersible in aqueous solvents at concentrations of 1 mg/ml. To achieve suspension in water, heating to about 50°C with intermittent vortexing or sonication is recommended. Allow ample time for dispersion to occur. The use of 0.5 % triethylamine aids in dispersion. Triethylamine is very basic and may be neutralized with Tris HCl to avoid hydrolysis of the LPS fatty acid chains.

### Description

LPS from *Escherichia coli* O111:B4 is a form of lipopolysaccharide (LPS) extracted from wild-type S-form *E. coli* serotype O111:B4. It is commonly used to activate toll-like receptor 4 (TLR4) on leukocytes, eliciting inflammatory signaling in isolated cells and *in vivo*.<sup>1-4</sup> This form of LPS includes three regions, the O-antigenic polysaccharide chain, the core oligosaccharide, and lipid A.

### References

1. Mai, K., Chui, J.J.Y., Di Girolamo, N., *et al.* Role of toll-like receptors in human iris pigment epithelial cells and their response to pathogen-associated molecular patterns. *J. Inflamm. (Lond)* **11(20)**, (2014).
2. Medearis, D.N., Camitta, B.M., and Heath, E.C. Cell wall composition and virulence in *Escherichia coli*. *J. Exp. Med.* **128(3)**, 399-414 (1968).
3. Migale, R., Herbert, B.R., Lee, Y.S., *et al.* Specific lipopolysaccharide serotypes induce differential maternal and neonatal inflammatory responses in a murine model of preterm labor. *Am. J. Pathol.* **185(9)**, 2390-2401 (2015).
4. Pirianov, G., MacIntyre, D.A., Lee, Y., *et al.* Specific inhibition of c-Jun N-terminal kinase delays preterm labour and reduces mortality. *Reproduction* **150(4)**, 269-277 (2015).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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