

**AM26274LE-N****Monoclonal Antibody to Lipoteichoic Acid (LTA) - Low Endotoxin**

<b>Quantity:</b>	0.2 mg
<b>Concentration:</b>	> 0.2 mg/ml
<b>Background:</b>	LTA, a glycerol phosphate surface polymer, is a component of the envelope of Gram-positive bacteria. LTA is anchored via its glycolipids to the membrane and carries a polysaccharide chain extending into the peptidoglycan layer of the cell wall. LTA is released spontaneously into the culture medium during growth of gram-positive bacteria. LTA functions as an immune activator with characteristics very similar to lipopolysaccharide (LPS) from Gram-negative bacteria. LTA binds to CD14 and triggers activation predominantly via Toll-like receptor 2. Although LTA is internalized and traffics to the Golgi, the cellular activation in response to LTA occurs at the cell surface.
<b>Host / Isotype:</b>	Mouse / IgG3
<b>Recommended Isotype Controls:</b>	AM08210LE-N
<b>Clone:</b>	55
<b>Immunogen:</b>	Microbial mixture of <i>Streptococcus sobrius</i> HG961, HG962, HG970, and HG977 (Ref.1).
<b>Format:</b>	<b>State:</b> Liquid Culture Medium with a Low Endotoxin level <b>Preservatives:</b> 0.02% Sodium Azide
<b>Applications:</b>	<b>Immunohistochemistry on Frozen Sections:</b> The typical starting working dilution is 1/50. <b>Flow Cytometry:</b> 1/250 (Ref.10). <b>Immunoassay:</b> For detection, 1.2 µg/ml antibody in PBS was added for 1 hr at 37°C on LTA coated plates (Ref.2,3,8). <b>Immunofluorescence</b> (Ref.4,9): 60' in PBS/0.02%BSA/0.02% Saponin (Ref.4). <b>Western blot</b> (Ref 5-7): A reduced or native sample treatment and run on 15% SDS-Page. Blot was incubated o/n at 4°C with a 1/1000 dilution. The band size is ~17 kDa (Ref.6,7). The typical starting working dilution is 1/50. <b>Positive Control:</b> Culture medium of Gram-positive bacteria. <b>Negative Control:</b> Culture medium of eukaryotic cells. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	The monoclonal antibody 55 recognizes Lipoteichoic Acid (LTA).
<b>Storage:</b>	Store undiluted at 2-8°C. <b>DO NOT FREEZE!</b> Shelf life: one year from despatch.

**Product Citations:****Originator or purchased from resellers:**

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3. van Langevelde P, Ravensbergen E, Grashoff P, Beekhuizen H, Groeneveld PH, van Dissel JT. Antibiotic-induced cell wall fragments of *Staphylococcus aureus* increase endothelial chemokine secretion and adhesiveness for granulocytes. *Antimicrob Agents Chemother.* 1999 Dec;43(12):2984-9. PubMed PMID: 10582893.
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5. Henneke P, Morath S, Uematsu S, Weichert S, Pfitzenmaier M, Takeuchi O, et al. Role of lipoteichoic acid in the phagocyte response to group B streptococcus. *J Immunol.* 2005 May 15;174(10):6449-55. PubMed PMID: 15879147.
6. Gründling A, Schneewind O. Synthesis of glycerol phosphate lipoteichoic acid in *Staphylococcus aureus*. *Proc Natl Acad Sci U S A.* 2007 May 15;104(20):8478-83. Epub 2007 May 3. PubMed PMID: 17483484.
7. Jimenez-Dalmaroni MJ, Xiao N, Corper AL, Verdino P, Ainge GD, Larsen DS, et al. Soluble CD36 ectodomain binds negatively charged diacylglycerol ligands and acts as a co-receptor for TLR2. *PLoS One.* 2009 Oct 22;4(10):e7411. doi: 10.1371/journal.pone.0007411. PubMed PMID: 19847289.
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9. Hashimoto Y, Tabuchi Y, Sakurai K, Kutsuna M, Kurokawa K, Awasaki T, et al. Identification of lipoteichoic acid as a ligand for draper in the phagocytosis of *Staphylococcus aureus* by *Drosophila* hemocytes. *J Immunol.* 2009 Dec 1;183(11):7451-60. doi: 10.4049/jimmunol.0901032. Epub 2009 Nov 4. PubMed PMID: 19890048.
10. Hirose Y, Murosaki S, Fujiki T, Yamamoto Y, Yoshikai Y, Yamashita M. Lipoteichoic acids on *Lactobacillus plantarum* cell surfaces correlate with induction of interleukin-12p40 production. *Microbiol Immunol.* 2010 Mar;54(3):143-51. doi: 10.1111/j.1348-0421.2009.00189.x. PubMed PMID: 20236424.