

# LBP (N-17): sc-14666

## BACKGROUND

Lipopolysaccharide-binding protein (LBP) is essential for the rapid induction of an inflammatory response in the presence of small amounts of lipopolysaccharide (LPS) or Gram-negative bacteria. During Gram-negative bacterial infections, membrane associated LPS, the principal stimulator of the innate immune system, is bound by the acute-phase reactant LBP. Secretion of LBP sensitizes the immune system to endotoxin, enhances the neutralization of endotoxin by high density lipoprotein and, at elevated levels, protects against sepsis. The human LBP sequence consists of a 25-residue signal sequence followed by a 452-residue mature protein containing 4 cysteine residues and five putative glycosylation sites. During inflammation, LBP is secreted by hepatic cells and intestinal epithelial cells. LPS bound to LBP through lipid A moieties is transferred to LPS receptors (CD14) on the surface of macrophages or to high-density lipoprotein (HDL) particles.

## REFERENCES

- Schumann, R.R., et al. 1990. Structure and function of lipopolysaccharide binding protein. *Science* 249: 1429-1431.
- Jack, R.S., et al. 1997. Lipopolysaccharide-binding protein is required to combat a murine Gram-negative bacterial infection. *Nature* 389: 742-745.

## CHROMOSOMAL LOCATION

Genetic locus: LBP (human) mapping to 20q11.23; Lbp (mouse) mapping to 2 H1.

## SOURCE

LBP (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LBP of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14666 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

LBP (N-17) is recommended for detection of LBP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

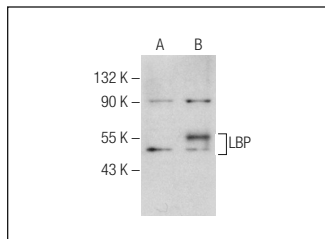
Suitable for use as control antibody for LBP siRNA (h): sc-43890, LBP siRNA (m): sc-146662, LBP shRNA Plasmid (h): sc-43890-SH, LBP shRNA Plasmid (m): sc-146662-SH, LBP shRNA (h) Lentiviral Particles: sc-43890-V and LBP shRNA (m) Lentiviral Particles: sc-146662-V.

Positive Controls: LBP (m): 293T Lysate: sc-127085.

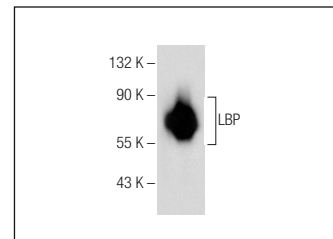
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



LBP (N-17): sc-14666. Western blot analysis of LBP expression in non-transfected: sc-117752 (A) and mouse LBP transfected: sc-127085 (B) 293T whole cell lysates.



LBP (N-17): sc-14666. Western blot analysis of human recombinant LBP.

## SELECT PRODUCT CITATIONS

- Stein, T., et al. 2004. Involution of the mouse mammary gland is associated with an immune cascade and an acute-phase response, involving LBP, CD14 and Stat3. *Breast Cancer Res.* 6: R75-R91.
- Hansen, G.H., et al. 2009. Lipopolysaccharide-binding protein: localization in secretory granules of Paneth cells in the mouse small intestine. *Histochem. Cell Biol.* 131: 727-732.
- Wei, L., et al. 2012. Early life stress inhibits expression of a novel innate immune pathway in the developing hippocampus. *Neuropsychopharmacology* 37: 567-580.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

**MONOS**  
Satisfaction  
Guaranteed

Try **LBP (4E8): sc-293253**, our highly recommended monoclonal alternative to LBP (N-17).