

LBP (K-15): sc-14668

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 5 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 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-14668 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LBP (K-15) 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).

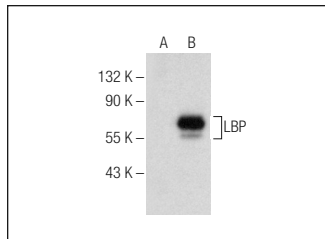
Suitable for use as control antibody for LBP siRNA (h): sc-43890, LBP siRNA (m): sc-146662, LBP shRNA Plasmid (h): sc-43890-SH, LBP shRNA Plasmid (m): sc-146662-SH, LBP shRNA (h) Lentiviral Particles: sc-43890-V and LBP shRNA (m) Lentiviral Particles: sc-146662-V.

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

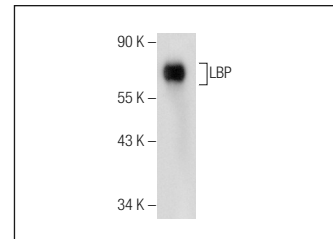
RECOMMENDED SECONDARY REAGENTS

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 (K-15): sc-14668. Western blot analysis of LBP expression in non-transfected: sc-117752 (A) and mouse LBP transfected: sc-127085 (B) 293T whole cell lysates.



LBP (K-15): sc-14668. Western blot analysis of human recombinant LBP.

STORAGE

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

SELECT PRODUCT CITATIONS

- Seksic, P., et al. 2010. Sera from patients with Crohn's disease break bacterial lipopolysaccharide tolerance of human intestinal epithelial cells via MD-2 activity. *Innate Immun.* 16: 381-390.
- Wei, L., et al. 2012. Early life stress inhibits expression of a novel innate immune pathway in the developing hippocampus. *Neuropsychopharmacology* 37: 567-580.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **LBP (4E8): sc-293253**, our highly recommended monoclonal alternative to LBP (K-15).