

# LITAF (D-5): sc-166546



The Power to Question

## BACKGROUND

Lipopolysaccharide (LPS) is a potent stimulator of monocytes and macrophages, causing secretion of tumor necrosis factor  $\alpha$  (TNF $\alpha$ ) and other inflammatory mediators. The inflammatory response to bacteria and bacterial products, such as LPS, is mediated by a variety of secreted factors, but cytotoxic effects of LPS have been ascribed to TNF $\alpha$  activity. LITAF (LPS-induced TNF $\alpha$  factor), Stat6B and the LITAF-Stat6B complex all play a role in the regulation of inflammatory cytokines in response to LPS or p53 stimulation in mammalian cells. LITAF is a nuclear protein crucial in TNF $\alpha$  gene transcription regulation. High levels of expression of LITAF mRNA have been observed predominantly in the placenta, peripheral blood leukocytes, lymph nodes and spleen.

## REFERENCES

1. Myokai, F., et al. 1999. A novel lipopolysaccharide-induced transcription factor regulating tumor necrosis factor  $\alpha$  gene expression: molecular cloning, sequencing, characterization, and chromosomal assignment. *Proc. Natl. Acad. Sci. USA* 96: 4518-4523.
2. Zhou, H.R., et al. 2003. Kinetics of lipopolysaccharide-induced transcription factor activation/inactivation and relation to proinflammatory gene expression in the murine spleen. *Toxicol. Appl. Pharmacol.* 187: 147-161.
3. Matsumura, Y., et al. 2004. PIG7/LITAF gene mutation and overexpression of its gene product in extramammary Paget's disease. *Int. J. Cancer* 111: 218-223.
4. Bolcato-Bellemin, A.L., et al. 2004. Molecular cloning and characterization of mouse LITAF cDNA: role in the regulation of tumor necrosis factor- $\alpha$  (TNF $\alpha$ ) gene expression. *J. Endotoxin Res.* 10: 15-23.
5. Tang, X., et al. 2005. LPS induces the interaction of a transcription factor, LPS-induced TNF $\alpha$  factor, and Stat6(B) with effects on multiple cytokines. *Proc. Natl. Acad. Sci. USA* 102: 5132-5137.

## CHROMOSOMAL LOCATION

Genetic locus: LITAF (human) mapping to 16p13.13.

## SOURCE

LITAF (D-5) is a mouse monoclonal antibody raised against amino acids 1-161 representing full length LITAF of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

LITAF (D-5) is recommended for detection of LITAF of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 LITAF siRNA (h): sc-45684, LITAF shRNA Plasmid (h): sc-45684-SH and LITAF shRNA (h) Lentiviral Particles: sc-45684-V.

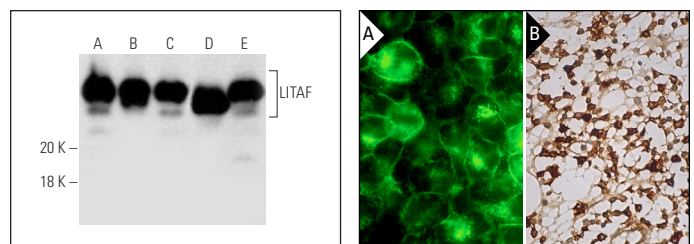
Molecular Weight of LITAF: 24 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



LITAF (D-5): sc-166546. Western blot analysis of LITAF expression in HeLa (A), Hep G2 (B), A-431 (C), LPS treated HL-60 (D) and LPS treated U-937 (E) whole cell lysates.

LITAF (D-5): sc-166546. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing membrane and cytoplasmic staining of hematopoietic cells (B).

## SELECT PRODUCT CITATIONS

1. Shi, Y., et al. 2016. The feedback loop of LITAF and BCL6 is involved in regulating apoptosis in B cell non-Hodgkin's-lymphoma. *Oncotarget* 7: 77444-77456.

## RESEARCH USE

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