

# LIME (C-15): sc-48578

## BACKGROUND

Lck-interacting molecule (LIME) is a 295 amino acid transmembrane adaptor protein primarily expressed in hematopoietic and lung cells. LIME has a short extracellular domain and a cytoplasmic tail containing five tyrosine-based motifs. LIME becomes tyrosine-phosphorylated after the CD4 or CD8 co-receptors cross-link. The phosphorylated LIME interacts with Lck, the Src family kinase, and Csk, its negative regulator. LIME is expressed during the early and late stages of T cell activation and appears to be involved in regulation of T cell activation by co-receptors. It may be involved in activation of the ERK and JNK (both are part of the mitogen-activated protein kinase family) pathways in T cells. BCR-mediated B cell activation may also involve LIME.

## REFERENCES

1. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609809. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Brdicková, N., Brdicka, T., Angelisová, P., Horváth, O., Spicka, J., Hilgert, I., Paces, J., Simeoni, L., Kliche, S., Merten, C., Schraven, B. and Horejsí, V. 2003. LIME: a new membrane Raft-associated adaptor protein involved in CD4 and CD8 co-receptor signaling. *J. Exp. Med.* 198: 1453-1462.
3. Hur, E.M., Son, M., Lee, O.H., Choi, Y.B., Park, C., Lee, H. and Yun, Y. 2003. LIME, a novel transmembrane adaptor protein, associates with p56 Lck and mediates T cell activation. *J. Exp. Med.* 198: 1463-1473.
4. Lovatt, M., Filby, A., Parravicini, V., Werlen, G., Palmer, E. and Zamoyska, R. 2006. Lck regulates the threshold of activation in primary T cells, while both Lck and Fyn contribute to the magnitude of the ERK response. *Mol. Cell. Biol.* 26: 8655-8665.
5. Ahn, E., Lee, H. and Yun, Y. 2006. LIME acts as a transmembrane adapter mediating BCR-dependent B cell activation. *Blood* 107: 1521-1527.

## CHROMOSOMAL LOCATION

Genetic locus: LIME1 (human) mapping to 20q13.33; Lime1 (mouse) mapping to 2 H4.

## SOURCE

LIME (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LIME 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-48578 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

LIME (C-15) is recommended for detection of LIME of mouse 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 LIME siRNA (h): sc-60934, LIME siRNA (m): sc-60935, LIME shRNA Plasmid (h): sc-60934-SH, LIME shRNA Plasmid (m): sc-60935-SH, LIME shRNA (h) Lentiviral Particles: sc-60934-V and LIME shRNA (m) Lentiviral Particles: sc-60935-V.

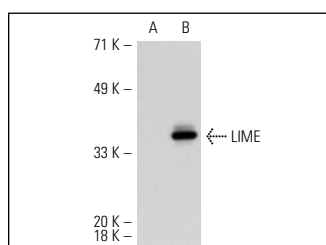
Molecular Weight of LIME: 34 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225 or LIME (h): 293 Lysate: sc-112792.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



LIME (C-15): sc-48578. Western blot analysis of LIME expression in non-transfected: sc-110760 (A) and human LIME transfected: sc-112792 (B) 293 whole cell lysates.

## RESEARCH USE

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

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Try **LIME (A-7): sc-365195** or **LIME (D-6): sc-166817**, our highly recommended monoclonal alternatives to LIME (C-15).