

LIME (K-16): sc-48579

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™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609809. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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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 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-48579 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 (K-16) is recommended for detection of LIME of human and, to a lesser extent, mouse 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 shRNA Plasmid (h): sc-60934-SH and LIME shRNA (h) Lentiviral Particles: sc-60934-V.

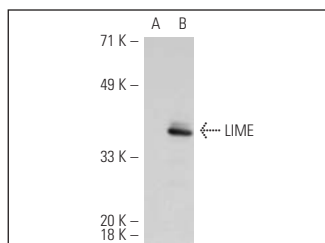
Molecular Weight of LIME: 34 kDa.

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™ 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



LIME (K-16): sc-48579. 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.

PROTOCOLS

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