

LAIR-1 (H-106): sc-366115

BACKGROUND

Leukocyte-associated Ig-like receptor-1, known as LAIR-1, is a transmembrane glycoprotein that is constitutively expressed on the majority of human peripheral blood mononuclear leukocytes. LAIR-1 is phosphorylated at the Tyr 233 and Tyr 263 residues, and once activated, LAIR-1 recruits SHP-1, an SH2 domain-containing phosphatase. SHP-1 is highly expressed in hematopoietic cells and functions as a negative regulator of cell signaling. SHP-1 also contributes to the establishment of TCR signaling thresholds in both developing and mature T lymphocytes. The binding of LAIR-1 to SHP-1 functions as a mechanism of regulating the role of SHP-1 in cell signaling. Occupancy of LAIR-1 on human myelomonocytic leukemic cell lines inhibits proliferation and leads to programmed cell death (PCD), and cross-linking of the LAIR-1 antigen on natural killer (NK) cells results in strong inhibition of NK cell-mediated cytotoxicity. Protein kinases responsible for tyrosine phosphorylation of LAIR-1 may belong to the Src family since PP1, a Src family kinase inhibitor, significantly inhibits its phosphorylation.

REFERENCES

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2. Poggi, A., Pellegatta, F., Leone, B., Moretta, L. and Zocchi, M. 2000. Engagement of the leukocyte-associated Ig-like receptor-1 induces programmed cell death and prevents NF κ B nuclear translocation in human myeloid leukemias. *Eur. J. Immunol.* 30: 2751-2758.
3. Xu, M., Runxiang, Z. and Zhao, A. 2000. Identification and characterization of leukocyte-associated Ig-like receptor-1 as a major anchor protein of tyrosine phosphatase SHP-1 in hematopoietic cells. *J. Biol. Chem.* 275: 17440-17446.
4. Fournier, N., Chalus, L., Durand, I., Garcia, E., Pin, J., Churakova, T., Patel, S., Zlot, C., Gorman, D., Zurawski, S., Abrams, J., Bates, E. and Garone, P. 2000. FDF03, a novel inhibitor receptor of the immunoglobulin superfamily, is expressed by human dendritic and myeloid cells. *J. Immunol.* 165: 1197-1209.

CHROMOSOMAL LOCATION

Genetic locus: LAIR1 (human) mapping to 19q13.42.

SOURCE

LAIR-1 (H-106) is a rabbit polyclonal antibody raised against amino acids 182-287 mapping at the C-terminus of LAIR-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG 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.

APPLICATIONS

LAIR-1 (H-106) is recommended for detection of LAIR-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 LAIR-1 siRNA (h): sc-72118, LAIR-1 shRNA Plasmid (h): sc-72118-SH and LAIR-1 shRNA (h) Lentiviral Particles: sc-72118-V.

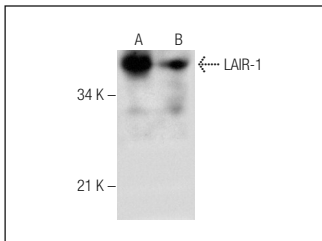
Molecular Weight of LAIR-1: 42 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



LAIR-1 (H-106): sc-366115. Western blot analysis of LAIR-1 expression in HuT 78 (A) and Jurkat (B) whole cell lysates.

RESEARCH USE

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

MONOS
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Try **LAIR-1 (F-5): sc-398141** or **LAIR-1 (G-1): sc-398140**, our highly recommended monoclonal alternatives to LAIR-1 (H-106).