SANTA CRUZ BIOTECHNOLOGY, INC.

LAX1 (S-14): sc-161789

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

LAX1 (lymphocyte transmembrane adaptor 1), also known as LAX, linker for activation of X cells or membrane-associated adapter protein LAX, is a 398 amino acid single-pass type III membrane protein that negatively regulates lymphocyte signaling. LAX1 is expressed in lymphoid tissues including thymus, spleen and peripheral blood leukocytes, along with several B cell, T cell, natural killer and monocyte cell lines. When stimulated by B or T cells, LAX1 becomes dramatically upregulated and also interacts with GRB2, Gads and PI 3-kinase p85 upon phosphorylation. LAX1 exists as two alternatively spliced isoforms that are encoded by a gene located on human chromosome 1. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Eudy, J.D., et al. 1998. Isolation of a gene encoding a novel member of the nuclear receptor superfamily from the critical region of Usher syndrome type IIa at 1q41. Genomics 50: 382-384.
2. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. Science 280: 1753-1757.
3. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
4. Zhu, M., et al. 2002. Molecular cloning of a novel gene encoding a membrane-associated adaptor protein (LAX) in lymphocyte signaling. J. Biol. Chem. 277: 46151-46158.
5. Zhu, M., et al. 2005. Negative regulation of lymphocyte activation by the adaptor protein LAX. J. Immunol. 174: 5612-5619.
6. Shapiro, M.J., et al. 2008. Negative regulation of TCR signaling by linker for activation of X cells via phosphotyrosine-dependent and -independent mechanisms. J. Immunol. 181: 7055-7061.

CHROMOSOMAL LOCATION

Genetic locus: LAX1 (human) mapping to 1q32.1; Lax1 (mouse) mapping to 1 E4.

SOURCE

LAX1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of LAX1 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-161789 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

LAX1 (S-14) is recommended for detection of LAX1 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), 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 LAX1 siRNA (h): sc-88833, LAX1 siRNA (m): sc-146658, LAX1 shRNA Plasmid (h): sc-88833-SH, LAX1 shRNA Plasmid (m): sc-146658-SH, LAX1 shRNA (h) Lentiviral Particles: sc-88833-V and LAX1 shRNA (m) Lentiviral Particles: sc-146658-V.

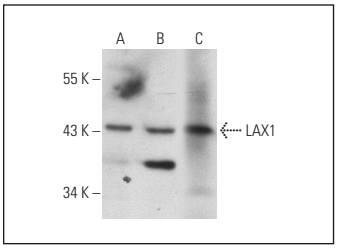
Molecular Weight of LAX1: 44 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or rat brain extract: sc-2392.

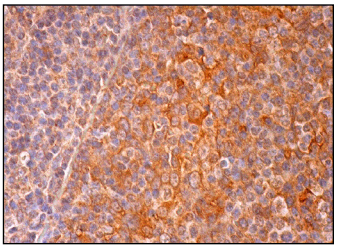
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



LAX1 (S-14): sc-161789. Western blot analysis of LAX1 expression in Jurkat (**A**) and HeLa (**B**) whole cell lysates and rat brain tissue extract (**C**).



LAX1 (S-14): sc-161789. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of cells in germinal centers and non-germinal centers.

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.