SANTA CRUZ BIOTECHNOLOGY, INC.

Lad (H-3): sc-515932

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lad (TSAD, TSAd, F2771, SH2D2A, SH2 domain protein 2A) is a cytoplasmic adapter protein that undergoes tyrosine-phosphorylation and influences T cell activation. Lad (SH2D2A) mRNA is present in peripheral blood leukocytes, thymus and spleen, and accumulates in the cytoplasm during T cell activation. The Lad gene maps to chromosome 1q23.1 in a region where alterations are characteristic to lymphomas.

REFERENCES

1. Spurkland, A., et al. 1998. Molecular cloning of a T cell-specific adapter protein (TSAd) containing an Src homology (SH) 2 domain and putative SH3 and phosphotyrosine binding sites. J. Biol. Chem. 273: 4539-4546.
2. Choi, Y.B., et al. 1999. Lad, an adapter protein interacting with the SH2 domain of $p56^{lck}$, is required for T cell activation. J. Immunol. 163: 5242-5249.
3. Dai, K.Z., et al. 2000. The SH2D2A gene encoding the T-cell-specific adapter protein (TSAd) is localized centromeric to the CD1 gene cluster on human Chromosome 1. Immunogenetics 51: 179-185.
4. Dai, K.Z., et al. 2001. The T cell regulator gene SH2D2A contributes to the genetic susceptibility of multiple sclerosis. Genes Immun. 2: 263-268.
5. Drappa, J., et al. 2003. Impaired T cell death and lupus-like autoimmunity in T cell-specific adapter protein-deficient mice. J. Exp. Med. 198: 809-821.
6. Nejad, S., et al. 2004. cDNA cloning of a rat orthologue of SH2D2A encoding T-cell-specific adaptor protein (TSAd): expression in T and NK cells. Immunogenetics 56: 338-342.
7. Dai, K.Z., et al. 2004. Transcriptional activation of the SH2D2A gene is dependent on a cyclic adenosine 5'-monophosphate-responsive element in the proximal SH2D2A promoter. J. Immunol. 172: 6144-6151.

CHROMOSOMAL LOCATION

Genetic locus: SH2D2A (human) mapping to 1q23.1.

SOURCE

Lad (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 296-322 near the C-terminus of Lad of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lad (H-3) is available conjugated to agarose (sc-515932 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515932 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515932 PE), fluorescein (sc-515932 FITC), Alexa Fluor® 488 (sc-515932 AF488), Alexa Fluor® 546 (sc-515932 AF546), Alexa Fluor® 594 (sc-515932 AF594) or Alexa Fluor® 647 (sc-515932 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515932 AF680) or Alexa Fluor® 790 (sc-515932 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Lad (H-3) is recommended for detection of Lad of human origin by Western Blotting (starting dilution 1:100, 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 Lad siRNA (h): sc-105604, Lad shRNA Plasmid (h): sc-105604-SH and Lad shRNA (h) Lentiviral Particles: sc-105604-V.

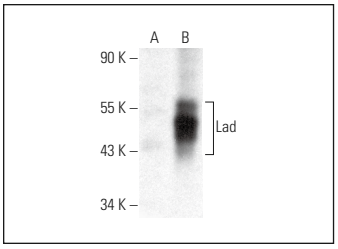
Molecular Weight of Lad: 52 kDa.

Positive Controls: Lad (h): 293T Lysate: sc-177448.

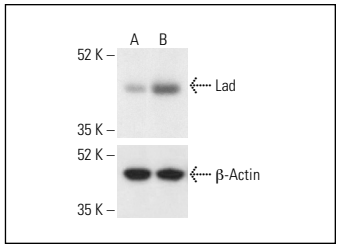
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Lad (H-3): sc-515932. Western blot analysis of Lad expression in non-transfected: sc-117752 (**A**) and human Lad transfected: sc-177448 (**B**) 293T whole cell lysates.



Lad (H-3): sc-515932. Western blot analysis of Lad expression in untreated (**A**) and chemically treated (**B**) HeLa whole cell lysates. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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