SANTA CRUZ BIOTECHNOLOGY, INC.

Lad siRNA (m): sc-146634

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 1q21 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.
8. LocusLink Report (LocusID: 9047). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Sh2d2a (mouse) mapping to 3 F1.

PRODUCT

Lad siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Lad shRNA Plasmid (m): sc-146634-SH and Lad shRNA (m) Lentiviral Particles: sc-146634-V as alternate gene silencing products.

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.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Lad siRNA (m) is recommended for the inhibition of Lad expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Lad gene expression knockdown using RT-PCR Primer: Lad (m)-PR: sc-146634-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.