SANTA CRUZ BIOTECHNOLOGY, INC.

Lck BP-1 siRNA (m): sc-35801

BACKGROUND

A total of eight membrane-associated tyrosine protein kinases have been identified within the Src gene family. These include c-Src, c-Yes, Fyn, Lck, Hck, Lyn, Blk and c-Fgr. The major translational product of the human Lck gene is a lymphocyte-specific tyrosine kinase designated pp56Lck. This is a membrane-associated molecule, most likely via covalently associated myristate at the amino terminus. The Lck gene has been shown to undergo rearrangement and overexpression in some murine lymphomas. In human studies, it has been demonstrated that the Lck gene is localized to a site in the genome which undergoes frequent chromosomal abnormalities in lymphomas and neuroblastomas. A novel Lck signaling intermediate, designated Lck BP-1, associates directly with the Lck SH3 domian via two proline-rich regions. Lck BP-1 also contains four tandem 37 amino acid repeats that form a putative helix-loop-helix DNA binding motif. Immunoprecipitation studies have shown that Lck BP-1 will coimmunoprecipitate with Lck from T cell lysates. Lck BP-1 is tyrosine phosphorylated in T cells subsequent to TCR activation.

REFERENCES

1. Marchildon, G.A., et al. 1984. Covalently bound myristate in a lymphoma tyrosine protein kinase. Proc. Natl. Acad. Sci. USA 81: 7679-7682.
2. Marth, J.D., et al. R.M. 1985. A lymphocyte-specific protein-tyrosine kinase gene is rearranged and overexpressed in the murine T cell lymphoma LSTRA. Cell 43: 393-404.
3. Marth, J.D., et al. 1986. Localization of a lymphocyte-specific protein tyrosine kinase gene (Lck) at a site of frequent chromosomal abnormalities in human lymphomas. Proc. Natl. Acad. Sci. USA 83: 7400-7404.
4. Voronova, A.F. et al. 1986. Expression of a new tyrosine protein kinase is stimulated by retrovirus promoter insertion. Nature 319: 682-685.
5. Bolen, J.B., et al. 1991. Expression and interactions of the Src family of tyrosine protein kinases in T lymphocytes. Adv. Cancer Res. 57: 103-149.
6. Takemoto, Y., et al. 1995. Lck BP-1, a proline-rich protein expressed in haematopoietic lineage cells, directly associates with the SH3 domain of protein tyrosine kinase p56lck. EMBO J. 14: 3403-3414.

CHROMOSOMAL LOCATION

Genetic locus: Hcls1 (mouse) mapping to 16 B3.

PRODUCT

Lck BP-1 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs 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 Lck BP-1 shRNA Plasmid (m): sc-35801-SH and Lck BP-1 shRNA (m) Lentiviral Particles: sc-35801-V as alternate gene silencing products.

For independent verification of Lck BP-1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-35801A, sc-35801B and sc-35801C.

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

Lck BP-1 siRNA (m) is recommended for the inhibition of Lck BP-1 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 Lck BP-1 gene expression knockdown using RT-PCR Primer: Lck BP-1 (m)-PR: sc-35801-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.