SANTA CRUZ BIOTECHNOLOGY, INC.

# Clnk siRNA (h): sc-42975

## BACKGROUND

Adaptor proteins mediate the recruitment of positive or negative regulators into signaling networks, modulate effector function by allosteric regulation of enzymatic activity and target other proteins for degradation in response to receptor ligation. Adaptor proteins can associate with numerous molecules and are required for coupling receptor ligation with more distal signaling events in immature thymocytes, mature T cells, platelets and mast cells. The SLP-76 family of adaptor proteins are expressed exclusively in cytokine-stimulated hematopoietic cells. The SLP-76 family member Clnk, also designated MIST (mast cell immunoreceptor signal transducer) is structurally related to SLP-76 and BLNK/BASH/SLP-65 hematopoietic cell-specific adaptor proteins. The human Clnk gene maps to chromosome 4 and encodes a 376 amino acid protein. In activated T cells and myeloid cells, the serine/threonine-specific protein kinase HPK-1 can be recruited to macromolecular complexes through Clnk and cause immunoreceptor-mediated activation of the interleukin 2 (IL-2) promoter.

## REFERENCES


1. Goitsuka, R., et al. 2000. A BASH/SLP-76-related adaptor protein MIST/Clnk involved in IgE receptor-mediated mast cell degranulation. Int. Immunol. 12: 573-580.
2. Goitsuka, R., et al. 2001. MIST functions through distinct domains in immunoreceptor signaling in the presence and absence of LAT. J. Biol. Chem. 276: 36043-36050.
3. Koretzky, G.A., et al. 2001. Positive and negative regulation of T cell activation by adaptor proteins. Nat. Rev. Immunol. 1: 95-107.
4. Yu, J., et al. 2001. Synergistic regulation of immunoreceptor signaling by SLP-76-related adaptor Clnk and serine/threonine protein kinase HPK-1. Mol. Cell. Biol. 21: 6102-6112.
5. Geng, L., et al. 2002. Signalling scaffolds and adaptors in T cell immunity. Br. J. Haematol. 116: 19-27.
6. LocusLink Report (LocusID: 2243). http://www.ncbi.nlm.nih.gov/LocusLink/


## CHROMOSOMAL LOCATION

Genetic locus: CLNK (human) mapping to 4p16.1.

## PRODUCT

Clnk siRNA (h) 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 Clnk shRNA Plasmid (h): sc-42975-SH and Clnk shRNA (h) Lentiviral Particles: sc-42975-V as alternate gene silencing products.

For independent verification of Clnk (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42975A, sc-42975B and sc-42975C.

## RESEARCH USE

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

## 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

Clnk siRNA (h) is recommended for the inhibition of Clnk expression in human 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 Clnk gene expression knockdown using RT-PCR Primer: Clnk (h)-PR: sc-42975-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

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