

# Lyst siRNA (h): sc-88631

## BACKGROUND

Proteins that contain WD-repeats participate in a wide range of cellular functions, including chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. Lyst (lysosomal trafficking regulator), also referred to as CHS or CHS1, is a 3,801 amino acid cytoplasmic protein that is abundantly expressed in adult and fetal thymus, peripheral blood leukocytes, bone marrow and several regions of adult brain.

Existing as three alternatively spliced isoforms and consisting of one BEACH domain and seven WD repeats, Lyst is suggested to play a critical role in sorting endosomal resident proteins into late multivesicular endosomes. Lyst associates with CENPJ, Centrobin and EHZF. Defects in the gene encoding Lyst leads to Chediak-Higashi syndrome (CHS), a rare autosomal recessive disorder characterized by hypopigmentation, severe immunologic deficiency, a bleeding tendency, neurologic abnormalities, abnormal intracellular transport to and from the lysosome and giant inclusion bodies in a variety of cell types.

## REFERENCES

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3. Barbosa, M.D., et al. 1997. Identification of mutations in two major mRNA isoforms of the Chediak-Higashi syndrome gene in human and mouse. *Hum. Mol. Genet.* 6: 1091-1098.
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6. Masui, N., et al. 2004. An allele-specific genotyping method for rat Lyst (lysosomal trafficking regulator) gene. *Exp. Anim.* 53: 77-80.
7. Rudelius, M., et al. 2006. A missense mutation in the WD40 domain of murine Lyst is linked to severe progressive Purkinje cell degeneration. *Acta Neuropathol.* 112: 267-276.
8. Möhlig, H., et al. 2007. The WD repeat protein FAN regulates lysosome size independent from abnormal downregulation/membrane recruitment of protein kinase C. *Exp. Cell Res.* 313: 2703-2718.
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## CHROMOSOMAL LOCATION

Genetic locus: LYST (human) mapping to 1q42.3.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

Lyst 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Lyst shRNA Plasmid (h): sc-88631-SH and Lyst shRNA (h) Lentiviral Particles: sc-88631-V as alternate gene silencing products.

For independent verification of Lyst (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-88631A, sc-88631B and sc-88631C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Lyst siRNA (h) is recommended for the inhibition of Lyst 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  $\mu$ M in 66  $\mu$ l. 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 Lyst gene expression knockdown using RT-PCR Primer: Lyst (h)-PR: sc-88631-PR (20  $\mu$ l). 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.