SANTA CRUZ BIOTECHNOLOGY, INC.

# Herc5 siRNA (h): sc-62455

## BACKGROUND

Herc5 (probable E3 ubiquitin-protein ligase Herc5, HECT domain and RCC1-like domain-containing protein 5) is a 1,024 amino acid protein encoded by the human gene HERC5. Herc5 belongs to the Herc family of ubiquitin ligases, all of which contain one HECT domain and five RCC1-like domain (RLD). The 350-amino acid HECT domain is predicted to catalyze the formation of a thioester with ubiquitin before transferring it to a substrate, and the RLD is predicted to act as a guanine nucleotide exchange factor for small G proteins. Cyclin E, as well as other cyclins, specifically interact with Herc5, even in the absence of p21. Cdk inhibitors, however, including p21 and p27, exhibit either weak or no interaction with Herc5. Found in the cytoplasmic, perinuclear region, Herc5 is largely expressed in testis and to a lesser degree in ovary.

## REFERENCES


1. Buard, J., et al. 2000. Somatic versus germline mutation processes at minisatellite CEB1 (D2S90) in humans and transgenic mice. Genomics 65: 95-103.
2. Mitsui, K., et al. 2000. A novel human gene encoding HECT domain and RCC1-like repeats interacts with cyclins and is potentially regulated by the tumor suppressor proteins. Biochem. Biophys. Res. Commun. 266: 115-122.
3. Kroismayr, R., et al. 2004. Herc5, a HECT E3 ubiquitin ligase tightly regulated in LPS activated endothelial cells. J. Cell Sci. 117: 4749-4756.
4. Takeuchi, T., et al. 2006. Identification and Herc5-mediated ISGylation of novel target proteins. Biochem. Biophys. Res. Commun. 348: 473-477.
5. Dastur, A., et al. 2006. Herc5, an interferon-induced HECT E3 enzyme, is required for conjugation of ISG15 in human cells. J. Biol. Chem. 281: 4334-4338.


## CHROMOSOMAL LOCATION

Genetic locus: HERC5 (human) mapping to 4q22.1.

## PRODUCT

Herc5 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 Herc5 shRNA Plasmid (h): sc-62455-SH and Herc5 shRNA (h) Lentiviral Particles: sc-62455-V as alternate gene silencing products.

For independent verification of Herc5 (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-62455A, sc-62455B and sc-62455C.

## 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

Herc5 siRNA (h) is recommended for the inhibition of Herc5 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 Herc5 gene expression knockdown using RT-PCR Primer: Herc5 (h)-PR: sc-62455-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.