

# HDGFRP2 siRNA (h): sc-105539

## BACKGROUND

HDGFRP2 (hepatoma-derived growth factor-related protein 2), also known as HRP-2 or HDGF-2, is a 671 amino acid nuclear protein belonging to the HDGF family and containing one PWWP domain. The PWWP domain is located at the N-terminus and binds to methyl-lysine-containing histones. HDGF was initially characterized as a secreted mitogen from the Huh-7 human hepatoma cell line. HDGF is also reported to be involved in organ development and lung remodeling after injury by promoting proliferation of lung epithelial cells. HDGFRP2 is thought to be involved in the control of cellular growth, particularly in hepatocellular carcinoma tissue where it is overexpressed, through the regulation of cyclin D1 expression. HDGFRP2 is also thought to be involved in LEDGF/p75-independent HIV-1 replication, determining HIV-1 integration site selection. The HDGFRP2 gene is located on human chromosome 19 and is conserved in mouse, rat, chimpanzee, bovine, canine and chicken.

## REFERENCES

1. Izumoto, Y., et al. 1997. Hepatoma-derived growth factor belongs to a gene family in mice showing significant homology in the amino terminus. *Biochem. Biophys. Res. Commun.* 238: 26-32.
2. Vanegas, M., et al. 2005. Identification of the LEDGF/p75 HIV-1 integrase-interaction domain and NLS reveals NLS-independent chromatin tethering. *J. Cell Sci.* 118: 1733-1743.
3. Vandegraaff, N., et al. 2006. Biochemical and genetic analyses of integrase-interacting proteins lens epithelium-derived growth factor (LEDGF)/p75 and hepatoma-derived growth factor related protein 2 (HRP2) in preintegration complex function and HIV-1 replication. *Virology* 346: 415-426.
4. Wu, H., et al. 2011. Structural and histone binding ability characterizations of human PWWP domains. *PLoS ONE* 6: e18919.
5. Schrijvers, R., et al. 2012. LEDGF/p75-independent HIV-1 replication demonstrates a role for HRP-2 and remains sensitive to inhibition by LEDGIns. *PLoS Pathog.* 8: e1002558.
6. Schrijvers, R., et al. 2012. HRP-2 determines HIV-1 integration site selection in LEDGF/p75 depleted cells. *Retrovirology* 9: 84.

## CHROMOSOMAL LOCATION

Genetic locus: HDGFRP2 (human) mapping to 19p13.3.

## PRODUCT

HDGFRP2 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 HDGFRP2 shRNA Plasmid (h): sc-105539-SH and HDGFRP2 shRNA (h) Lentiviral Particles: sc-105539-V as alternate gene silencing products.

For independent verification of HDGFRP2 (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-105539A, sc-105539B and sc-105539C.

## 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

HDGFRP2 siRNA (h) is recommended for the inhibition of HDGFRP2 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 HDGFRP2 gene expression knockdown using RT-PCR Primer: HDGFRP2 (h)-PR: sc-105539-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Ortiz-Hernandez, G.L., et al. 2021. The LEDGF/p75 integrase binding domain interactome contributes to the survival, clonogenicity, and tumorsphere formation of docetaxel-resistant prostate cancer cells. *Cells* 10: 2723.

## RESEARCH USE

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

## PROTOCOLS

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