

HPRG siRNA (h): sc-60808

BACKGROUND

The exact function of the histidine-proline-rich glycoprotein (HPRG) is not yet known. The HPRG protein sequence has a high proline and histidine content and has many internal repeat sequences. HPRG binds dyes, heme and divalent metal ions and can inhibit rosette formation. This protein has been shown to interact with thrombospondin, heparin and plasminogen. It may also play a role in mediating the contact activation phase of the intrinsic blood coagulation cascade. HPRG is expressed by the liver and is detected as a secreted protein in plasma.

REFERENCES

1. Koide, T., et al. 1986. Amino acid sequence of human histidine-rich glycoprotein derived from the nucleotide sequence of its cDNA. *Biochemistry* 25: 2220-2225.
2. Hennis, B.C., et al. 1994. Evidence for the absence of intron H of the histidine-rich glycoprotein (HRG) gene: genetic mapping and *in situ* localization of HRG to chromosome 3q28-q29. *Genomics* 19: 195-197.
3. Borza, D.B., et al. 2004. Effects of histidine-proline-rich glycoprotein on plasminogen activation in solution and on surfaces. *Blood Coagul. Fibrinolysis* 15: 663-672.
4. Donate, F., et al. 2004. Extracellular tropomyosin: a novel common pathway target for anti-angiogenic therapy. *Curr. Cancer Drug Targets* 4: 543-553.
5. Donate, F., et al. 2004. Peptides derived from the histidine-proline domain of the histidine-proline-rich glycoprotein bind to tropomyosin and have antiangiogenic and antitumor activities. *Cancer Res.* 64: 5812-5817.

CHROMOSOMAL LOCATION

Genetic locus: HRG (human) mapping to 3q27.3.

PRODUCT

HPRG 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HPRG shRNA Plasmid (h): sc-60808-SH and HPRG shRNA (h) Lentiviral Particles: sc-60808-V as alternate gene silencing products.

For independent verification of HPRG (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-60808A, sc-60808B and sc-60808C.

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

APPLICATIONS

HPRG siRNA (h) is recommended for the inhibition of HPRG 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

HPRG (G-10): sc-398239 is recommended as a control antibody for monitoring of HPRG gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HPRG gene expression knockdown using RT-PCR Primer: HPRG (h)-PR: sc-60808-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Xia, W., et al. 2013. An heregulin-EGFR-HER3 autocrine signaling axis can mediate acquired lapatinib resistance in HER2⁺ breast cancer models. *Breast Cancer Res.* 15: R85.

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.