SANTA CRUZ BIOTECHNOLOGY, INC.

HPRG siRNA (m): sc-60809

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.
6. Guan, X., et al. 2004. Histidine-proline rich glycoprotein (HPRG) binds and transduces anti-angiogenic signals through cell surface tropomyosin on endothelial cells. Thromb. Haemost. 92: 403-412.

CHROMOSOMAL LOCATION

Genetic locus: Hrg (mouse) mapping to 16 B1.

PRODUCT

HPRG siRNA (m) 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 HPRG shRNA Plasmid (m): sc-60809-SH and HPRG shRNA (m) Lentiviral Particles: sc-60809-V as alternate gene silencing products.

For independent verification of HPRG (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60809A, sc-60809B and sc-60809C.

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.

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

HPRG siRNA (m) is recommended for the inhibition of HPRG expression in mouse 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.

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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (m)-PR: sc-60809-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.