SANTA CRUZ BIOTECHNOLOGY, INC.

HPRG (N-13): sc-47045

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., Foster, D., Yoshitake, S. and Davie, E.W. 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., Frants, R.R., Bakker, E., Vossen, R.H., van der Poort, E.W., Blonden, L.A., Cox, S., Khan, P.M., Spurr, N.K. and Kluft, C. 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., Shipulina, N.V. and Morgan, W.T. 2004. Effects of histidine-proline-rich glycoprotein on plasminogen activation in solution and on surfaces. Blood Coagul. Fibrinolysis 15: 663-672.
4. Donate, F., McCrae, K., Shaw, D.E. and Mazar, A.P. 2004. Extracellular tropomyosin: a novel common pathway target for antiangiogenic therapy. Curr. Cancer Drug Targets 4: 543-553.
5. Donate, F., Juarez, J.C., Guan, X., Shipulina, N.V., Plunkett, M.L., Tel-Tsur, Z., Shaw, D.E., Morgan, W.T. and Mazar, A.P. 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; Hrg (mouse) mapping to 16 B1.

SOURCE

HPRG (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HPRG of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47045 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

HPRG (N-13) is recommended for detection of mature HRG and HPRG precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HPRG (N-13) is also recommended for detection of mature HRG and HPRG precursor in additional species, including equine and canine.

Suitable for use as control antibody for HPRG siRNA (h): sc-60808, HPRG siRNA (m): sc-60809, HPRG shRNA Plasmid (h): sc-60808-SH, HPRG shRNA Plasmid (m): sc-60809-SH, HPRG shRNA (h) Lentiviral Particles: sc-60808-V and HPRG shRNA (m) Lentiviral Particles: sc-60809-V.

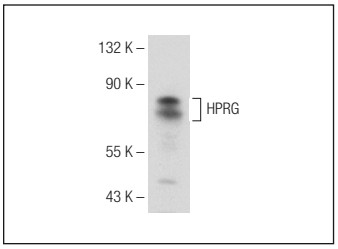
Molecular Weight of HPRG: 70-95 kDa.

Positive Controls: human plasma extract: sc-364374.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HPRG (N-13): sc-47045. Western blot analysis of HPRG in human plasma.

RESEARCH USE

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