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HRG Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7327a

Product Information

Application	IHC-P, WB, E
Primary Accession	P04196
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18729
Calculated MW	59578
Antigen Region	13-42

Additional Information

Gene ID	3273
Other Names	Histidine-rich glycoprotein, Histidine-proline-rich glycoprotein, HPRG, HRG
Target/Specificity	This HRG antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 13-42 amino acids from the N-terminal region of human HRG.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	HRG Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HRG
Function	Plasma glycoprotein that binds a number of ligands such as heme, heparin, heparan sulfate, thrombospondin, plasminogen, and divalent metal ions. Binds heparin and heparin/glycosaminoglycans in a zinc-dependent manner. Binds heparan sulfate on the surface of liver, lung, kidney and heart endothelial cells. Binds to N-sulfated polysaccharide chains on the surface of

liver endothelial cells. Inhibits rosette formation. Acts as an adapter protein and is implicated in regulating many processes such as immune complex and pathogen clearance, cell chemotaxis, cell adhesion, angiogenesis, coagulation and fibrinolysis. Mediates clearance of necrotic cells through enhancing the phagocytosis of necrotic cells in a heparan sulfate-dependent pathway. This process can be regulated by the presence of certain HRG ligands such as heparin and zinc ions. Binds to IgG subclasses of immunoglobins containing kappa and lambda light chains with different affinities regulating their clearance and inhibiting the formation of insoluble immune complexes. Tethers plasminogen to the cell surface. Binds T-cells and alters the cell morphology. Modulates angiogenesis by blocking the CD6-mediated antiangiongenic effect of thrombospondins, THBS1 and THBS2. Acts as a regulator of the vascular endothelial growth factor (VEGF) signaling pathway; inhibits endothelial cell motility by reducing VEGF-induced complex formation between PXN/paxillin and ILK/integrin-linked protein kinase and by promoting inhibition of VEGF-induced tyrosine phosphorylation of focal adhesion kinases and alpha-actinins in endothelial cells. Also plays a role in the regulation of tumor angiogenesis and tumor immune surveillance. Normalizes tumor vessels and promotes antitumor immunity by polarizing tumor-associated macrophages, leading to decreased tumor growth and metastasis.

Cellular Location Secreted.

Tissue Location Expressed in macrophages and in malignant cells. Expressed by the liver and secreted in plasma (at protein level)

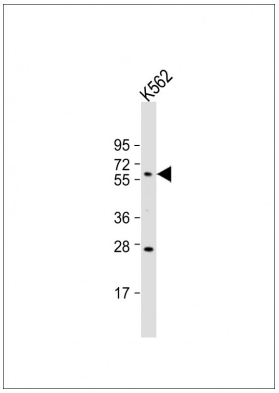
Background

HRG contains two cystatin-like domains and is located in plasma and platelets. The physiological function has not been determined but it is known that the protein binds heme, dyes and divalent metal ions. It can inhibit rosette formation and interacts with heparin, thrombospondin and plasminogen. Two of the protein's effects, the inhibition of fibrinolysis and the reduction of inhibition of coagulation, indicate a potential prothrombotic effect. Mutations in this gene lead to thrombophilia due to abnormal histidine-rich glycoprotein levels.

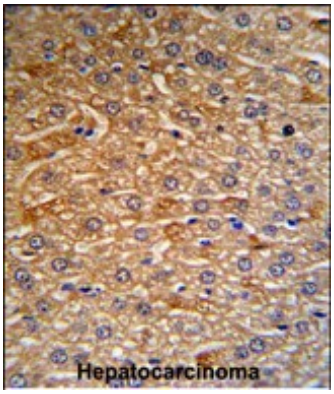
References

Vanwildemeersch,M., Olsson,A.K. J. Biol. Chem. 281 (15), 10298-10304 (2006)
Jones,A.L., Poon,I.K. J. Biol. Chem. 280 (42), 35733-35741 (2005)
Hennis,B.C. and Kluft,C. Nucleic Acids Res. 19 (15), 4311 (1991)

Images



Anti-HRG Antibody (N-term) at 1:1000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 60 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



HRG Antibody (N-term) (RB18729) IHC analysis in formalin fixed and paraffin embedded human hepatocarcinoma tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the HRG Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.