Active Histidine Rich Glycoprotein (HRG)

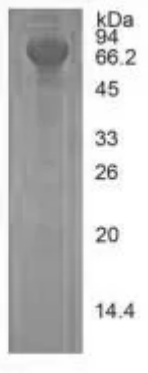
Catalog#:PHH12853

概述（Summary）

别称（Alternative Names）	HPRG; HRGP; Histidine-Proline Rich Glycoprotein; Thrombophilia Due To Elevated HRG
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Val19-Lys525】
Accession #	P04196
表达宿主（Host）	293F
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	59.3 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	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.

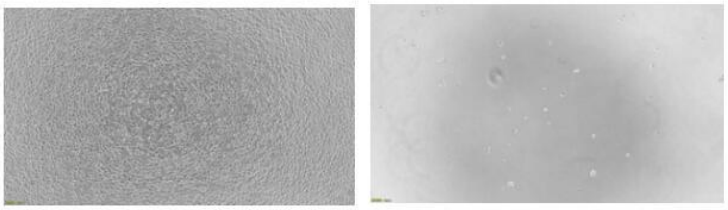
Mediates clearance of necrotic cells through enhancing the phagocytosis of necrotic cells in a heparan sulfate-dependent pathway. This process can be regulated by the presence of certain HRG ligands such as heparin and zinc ions. Binds to IgG subclasses of immunoglobins containing kappa and lambda light 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.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



A B

Figure 1. The adhesion of MOLT-4 supported by recombinant human HRG

(A) MOLT-4 cultured in recombinat human HRG coated plates (0.1 μg/mL with 100 μL/well);

(B) MOLT-4 cultured in without-protein coated plates.

Human histidine-rich glycoprotein (HRG) is a multidomain, monomeric, secreted, 67-75 kDa member of the cystatin superfamily of molecules. Its name derives from the fact that 26% of its amino acids (aa) are histidine and proline. In human, it is synthesized as a 525 aa precursor that contains an 18 aa signal sequence and a 507 aa mature region. Five distinct domains are recognized in the mature molecule. As HRG has the function of cell adhesion, we measure the activity of recombinant human HRG by the ability of the immobilized protein to support the adhesion of con-A activated MOLT 4 human acute lymphoblastic leukemia cells. When 1 x 105 cells/well with 7.5 ug/ml conA are added to recombinat human HRG coated plates (0.1 μg/mL with 100 μL/well), >70% cells will adhere after 2 hour incubation at 37 ℃. The adhesion of MOLT-4 after 2 hour incubation at 37 ℃ observed by inverted microscope was shown in Figure 1.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.