

## ARG82374 Human HRG / HPRG ELISA Kit

Package: 96 wells  
Store at: 4°C

### Component

Cat. No.	Component Name	Package	Temp
ARG82374-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG82374-002	Standard	2 X 10 ng/vial	4°C
ARG82374-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG82374-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG82374-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG82374-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG82374-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG82374-008	25X Wash buffer	20 ml	4°C
ARG82374-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG82374-010	STOP solution	10 ml (Ready to use)	4°C
ARG82374-011	Plate sealer	4 strips	Room temperature

### Summary

Product Description	ARG82374 Human HRG / HPRG ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human HRG / HPRG in serum, plasma (EDTA, heparin) and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	HRG / HPRG
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	78 pg/ml
Sample Type	Serum, plasma (EDTA, heparin) and cell culture supernatants.
Standard Range	156 - 10000 pg/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: 4.9% Inter-Assay CV: 7.0%

Alternate Names THPH11; Histidine-rich glycoprotein; Histidine-proline-rich glycoprotein; HPRG; HRGP

## Application Instructions

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Assay Time ~ 5 hours

## Properties

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Form 96 well

Storage instruction Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.

Note For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

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Gene Symbol HRG

Gene Full Name histidine-rich glycoprotein

Background This histidine-rich glycoprotein 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. The encoded protein also has a peptide that displays antimicrobial activity against *C. albicans*, *E. coli*, *S. aureus*, *P. aeruginosa*, and *E. faecalis*. 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. [provided by RefSeq, Nov 2014]

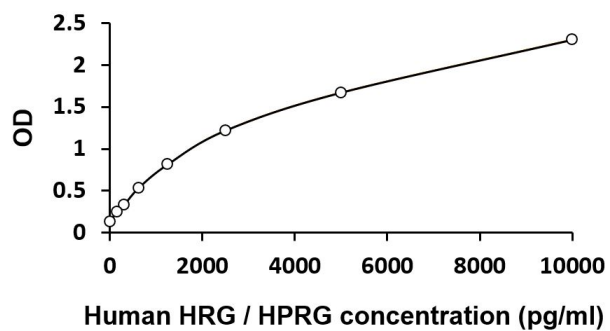
Function Plasma glycoprotein that binds a number of ligands such as heme, heparin, heparan sulfate, thrombospondin, plasminogen, and divalent metal ions. Binds heparin and heparin/glycosaminoglycans in a zinc-dependent manner. Binds heparan sulfate on the surface of liver, lung, kidney and heart endothelial 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 antiangiogenic 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. [UniProt]

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PTM Proteolytic cleavage produces several HRG fragments which are mostly disulfide-linked and, therefore, not released. Cleavage by plasmin is inhibited in the presence of heparin, zinc ions or in an acidic environment. Cleavage reduces binding of HRG to heparan sulfate, but enhances the ability of HRG to bind and tether plasminogen to the cell surface. On platelet activation, releases a 33 kDa antiangiogenic peptide which encompasses the HRR. Also cleaved in the C-terminal by plasmin.

N-glycosylated. [UniProt]

## Images



ARG82374 Human HRG / HPRG ELISA Kit standard curve image

ARG82374 Human HRG / HPRG ELISA Kit results of a typical standard run with optical density reading at 450 nm.