

HPRG Protein, Human (HEK293, His)

Cat. No.:	HY-P77380
Synonyms:	Histidine-rich glycoprotein; HPRG; HRG
Species:	Human
Source:	HEK293
Accession:	P04196/NP_000403.1 (V19-K525)
Gene ID:	3273
Molecular Weight:	75-80 kDa

PROPERTIES

AA Sequence

V S P T D C S A V E	P E A E K A L D L I	N K R R R D G Y L F	Q L L R I A D A H L
D R V E N T T V Y Y	L V L D V Q E S D C	S V L S R K Y W N D	C E P P D S R R P S
E I V I G Q C K V I	A T R H S H E S Q D	L R V I D F N C T T	S S V S S A L A N T
K D S P V L I D F F	E D T E R Y R K Q A	N K A L E K Y K E E	N D D F A S F R V D
R I E R V A R V R G	G E G T G Y F V D F	S V R N C P R H H F	P R H P N V F G F C
R A D L F Y D V E A	L D L E S P K N L V	I N C E V F D P Q E	H E N I N G V P P H
L G H P F H W G G H	E R S S T T K P P F	K P H G S R D H H H	P H K P H E H G P P
P P P D E R D H S H	G P P L P Q G P P P	L L P M S C S S C Q	H A T F G T N G A Q
R H S H N N N S S D	L H P H K H H S H E	Q H P H G H H P H A	H H P H E H D T H R
Q H P H G H H P H G	H H P H G H H P H G	H H P H G H H P H C	H D F Q D Y G P C D
P P P H N Q G H C C	H G H G P P P G H L	R R R G P G K G P R	P F H C R Q I G S V
Y R L P P L R K G E	V L P L P E A N F P	S F P L P H H K H P	L K P D N Q P F P Q
S V S E S C P G K F	K S G F P Q V S M F	F T H T F P K	

Appearance Lyophilized powder

Formulation Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in PBS, pH 7.4. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The HPRG Protein is a versatile plasma glycoprotein with a diverse range of ligand-binding capabilities, including heme, heparin, heparan sulfate, thrombospondin, plasminogen, and divalent metal ions. It exhibits zinc-dependent binding to heparin and heparin/glycosaminoglycans and interacts with heparan sulfate on the surfaces of liver, lung, kidney, and heart endothelial cells. Acting as an adapter protein, HPRG is implicated in the regulation of numerous processes such as immune complex and pathogen clearance, cell chemotaxis, cell adhesion, angiogenesis, coagulation, and fibrinolysis. HPRG also mediates the clearance of necrotic cells by enhancing phagocytosis in a heparan sulfate-dependent pathway, with regulation by specific ligands like heparin and zinc ions. Moreover, it binds to IgG subclasses, influencing their clearance and inhibiting the formation of insoluble immune complexes. Additionally, HPRG tethers plasminogen to cell surfaces, alters T-cell morphology, and modulates angiogenesis by blocking CD6-mediated antiangiogenic effects. Acting as a regulator in the vascular endothelial growth factor (VEGF) signaling pathway, HPRG inhibits endothelial cell motility and plays a role in tumor angiogenesis and immune surveillance, normalizing tumor vessels and promoting antitumor immunity by influencing tumor-associated macrophages.

Caution: Product has not been fully validated for medical applications. For research use only.

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