Recombinant Human HPRG/HRG Protein (His Tag)

Catalog No. PKSH031403

Note: Centrifuge before opening to ensure complete recovery of vial contents.

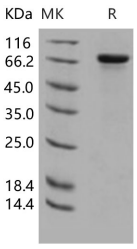
Description

Synonyms	HPRG;HRGP;THPH11
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Lys 525
Accession	NP_000403.1
Calculated Molecular Weight	59.0 kDa
Observed molecular weight	75-80 kDa
Tag	C-His
Bioactivity	Measured by its ability to support the adhesion of MOLT-4 human acute lymphoblastic leukemia cells. (Lamb-Wharton, R. J. and W. T. Morgen, 1993, Cell Immunol. 152: 544). Human HPRG immobilized at 1 μg/ml (100 μl/well) will induce > 65% MOLT4 cell adhesion (1 x 10^5 cells/well) in the presence of 7.5 μg/ml Concanvalin A.

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 97 % as determined by reducing SDS-PAGE.

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Background

Histidine-rich glycoprotein, also known as HRG and HPRG, is a glycoprotein located in plasma and platelets, and contains an unusually large amount of histidine and proline. In human, five distinct domains are recognized in the mature HPRG molecule. There are two N-terminal cystatin-like modules (aa 19 - 254) and one His-Pro-rich region (aa 350 - 497) that is flanked by two Pro-rich segments (aa 276 - 321 and 498 - 525). The His-Pro-rich region contains 10 tandem repeats with an HHPHG motif, and the N- and C-termini are linked by a disulfide bond. The specific functions of HRG remain unclear, but it is known that the protein binds heme, dyes and divalent metal ions. It inhibits 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. HPRG is evolutionarily, functionally and structurally related to cleaved high molecular weight kininogen (HKa), an anti-angiogenic polypeptide that stimulates apoptosis of proliferating endothelial cells through binding to cell-surface tropomyosin. The antiangiogenic activity of the multidomain plasma protein HPRG is localized to its histidine-proline-rich (H/P) domain and has recently been shown to be mediated, at least partially, through binding to cell-surface tropomyosin in fibroblast growth factor-2-activated endothelial cells.

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