



Recombinant Protein Technical Manual

Recombinant Human HPRG/HRG Protein (His Tag)(Active)
RPES2824

Product Data:

Product SKU: RPES2824

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_000403.1

Protein Information:

Molecular Mass: 59 kDa

AP Molecular Mass: 75-80 kDa

Tag: C-His

Bio-activity: 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 10E5 cells/well) in the presence of 7.5 µg/ml Concanvalin A.

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C 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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: HPRG;HRGP;THPH11

Immunogen Information:

Sequence: Met 1-Lys 525

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.