

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human HPRG in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant mouse HPRG is observed and less than 1% cross-reactivity with recombinant human (rh) Cystatin A, rhCystatin B, rhCystatin C, rhCystatin D, rhCystatin F, and rhCystatin E/M is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human HPRG Val19-Lys525 Accession # P04196
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human HPRG (Catalog # 1869-HP)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human histidine-rich glycoprotein (HPRG) is a multidomain, monomeric, secreted, 67-75 kDa member of the cystatin superfamily of molecules (1, 2). 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 (3). Five distinct domains are recognized in the mature 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) (3, 4). 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 (3, 5, 6). Human HPRG is only 60% aa identical to mouse HPRG. There are multiple ligands for HPRG. These include small molecular weight molecules (metal ions; heme), hemostatic molecules (heparan sulfate; TSP; plasminogen), and immune system components (T cells; macrophages) (1, 5). About 50% of plasma plasminogen circulates bound to HPRG. Upon immobilization to cell surface tropomyosin in a Zn⁺⁺-dependent manner, it is converted to plasmin by tPA (7-9). HPRG also shows antiangiogenic activity on endothelial cells (10).

References:

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