

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human HPRG in direct ELISAs and Western blots. In direct ELISAs, this antibody does not cross-react with recombinant human (rh) Cystatin B, C, D, E/M, S, A, SA, SN, rhFetuin A, B, rmHPRG, rhKininogen, or rhKininostatin.
Source	Monoclonal Mouse IgG _{2B} Clone # 227901
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human HPRG Val19-Lys525 Accession # P04196
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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).

PRODUCT SPECIFIC NOTICES

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