Mouse HPRG Antibody

Monoclonal Rat IgG_{2A} Clone # 242425

Catalog Number: MAB1905

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse HPRG in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 20% cross-reactivity with recombinant human (rh) HPRG is observed and no cross-reactivity with rhCystatin D, F, S, SA, SN, recombinant mouse (rm) Cystatin B, C, E/M, rmKininogen, and rhKininostatin is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 242425
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse HPRG Leu19-Lys525 Accession # BAB33094
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

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	1 µg/mL	Recombinant Mouse HPRG (Catalog # 1905-HP)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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

Mouse 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 22% of its amino acids (aa) are histidine and proline. In mouse, it is synthesized as a 525 amino acid (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 and one His-Pro-rich region that is flanked by two Pro-rich segments (3, 4). The His-Pro-rich region contains multiple tandem repeats with a GHHPH motif, while the N- and C-termini are linked by a disulfide bond (3, 5, 6). Mouse HPRG is only 60% aa identical to human HPRG, and 79% aa identical to rat 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). Finally, it binds to cytoplasmic ligand(s) exposed during cellular necrosis, and facilitates macrophage phagocytosis (11).

References:

1. Jones, A.L. *et al.* (2005) Immunol. Cell Biol. **83**:106.
2. Koide, T. and S. Odani (1987) FEBS Lett. **216**:17.
3. Hulett, M.D. and C.R. Parish (2000) Immunol. Cell Biol. **78**:280.
4. GenBank Accession # NP_444406.
5. Borza, D-B. *et al.* (1996) Biochemistry **35**:1925.
6. Sorensen, C.B. *et al.* (1993) FEBS Lett. **328**:285.
7. Donate, F. *et al.* (2004) Cancer Res. **64**:5812.
8. Borza, D-B. and W.T. Morgan (1997) J. Biol. Chem. **272**:5718.
9. Guan, X. *et al.* (2004) Thromb. Haemost. **92**:403.
10. Juarez, J.C. *et al.* (2002) Cancer Res. **62**:5344.
11. Jones, A.L. *et al.* (2005) J. Biol. Chem. **280**:35733.

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