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Antibody to Human Heparanase 1 (HPA1), Clone HP130
MOUSE MONOCLONAL

Catalog Number: AB-476
Quantity: 850 micrograms
Format: 20 mM Sodium Phosphate, 150 mM NaCl, pH 7.2, containing 0.01% Thimerosal
Host: Mouse
Isotype: IgG₁K
Immunogen: 65 kDa Heparanase precursor

Background:

Heparanase is an endo- β -D-glucuronidase, which degrades heparan sulfate side chains of heparan sulfate proteoglycans (HSPGs) in the extracellular matrix. Heparanase plays an important role in ECM degradation, facilitating the migration and extravasation of tumor cells and inflammatory leukocytes. Upon degradation, Heparanase releases growth factors and cytokines that stimulate cell proliferation and chemotaxis.

Heparanase is a heterodimer comprised of a 50 kDa subunit harboring the active site and an 8 kDa subunit. It is produced as a latent 65 kDa precursor and proteolytically processed to its active form. Heparanase is highly expressed in myeloid leukocytes (i.e. neutrophils) in platelets and in human placenta. Human heparanase was found to be upregulated in various types of primary tumors, correlating in some cases with increased tumor invasiveness and vascularity and with poor prospective survival.

Specificity and Preparation:

Anti-Human heparanase 1 (HPA1) is a protein G affinity-purified monoclonal antibody raised against the 65 kDa heparanase precursor. It recognizes the C-terminal region of both the latent pro-heparanase and the active heterodimeric enzyme. In immunoblot analysis, it reacts with the 50 kDa subunit and with the 65 kDa precursor of human heparanase. The antibodies cross react with the chicken heparanase. Each vial contains 850 μ g of antibody in 500 μ l of 0.22 micron-filtered solution of 20 mM Sodium Phosphate, 150 mM NaCl, pH 7.2, containing 0.01% Thimerosal. Purity is greater than 95% on SDS-PAGE.

Usage and Storage:

Applications include flow cytometry, immunohistochemistry (1:20), western blot (1:200), and immunoprecipitation.

Store at 4°C for six months. For extended storage, freeze in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.