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Affinity Purified Anti-human Heparanase 1 (HPA1) Clone HP3/17, Monoclonal Antibody

Catalog No.	Ins-26-1-0000-10	**Quantity:**	50 µg in 12.5 µl
	Ins-26-1-0000-11		100 µg in 25 µl
	Ins-26-1-0000-12		150 µg in 37.5 µl

Description: Heparanase is an endo-ß-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 extravasations of tumor cells and inflammatory leukocytes (1, 2, and 3). Upon degradation, heparanase releases growth factors and cytokines that stimulate cell proliferation and chemotaxis (4, 5).
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 (1, 6).
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 (7, 8).

Purity: Greater than 98% on SDS-PAGE when loaded 50 µg/lane.

Specificity: HP3/17 reacts with the 50 kDa subunit and with the 65 kDa precursor of human or mouse Heparanase by Western blotting and immunohistochemistry.

Antigen: Mab HP3/17 is a Protein G affinity purified monoclonal antibody raised against a polypeptide from the 50 kDa subunit of Heparanase.

Isotype: Mouse IgG_{2BK}

Clone: HP3/17

Formulation: Each vial contains 0.22 micron filtered solution of 20 mM Sodium Phosphate +150 mM NaCl, pH 7.2, containing 0.001% Thimerosal.

Storage & Stability: Store at 4˚C. Stable for six months from the date of shipment. For extended storage, freeze in working aliquots at -20˚C. **Avoid repeated freeze-thaw cycles**.

Applications: Western blotting: working dilution of 1:4,000.
Immunohistochemistry: working dilution of 1:40. The optimal antibody concentration should be determined for each specific application.

Patents: Anti-heparanase antibodies and their uses, including HP3/17 and its uses, are protected by US. Patents No. 6,177,545; 6,531,129, additional US patent applications and patents and patent applications worldwide.

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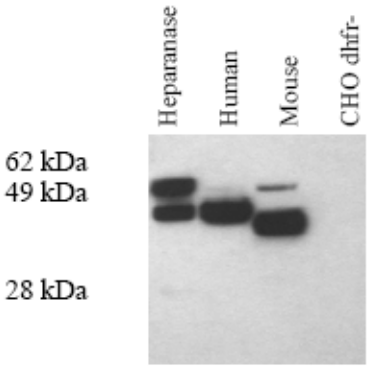
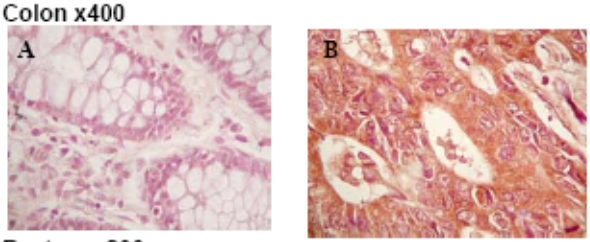
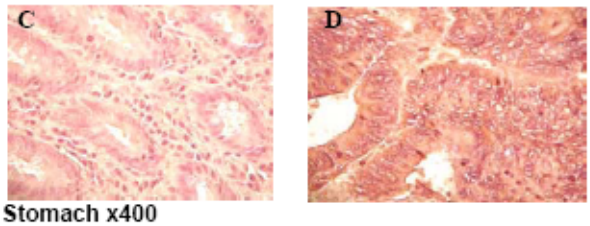


An extract from $2x10^4$ CHO cells, transfected with the human or the mouse Heparanases, and an extract from $5x10^5$ non-transfected CHO dhfr- cells, were loaded onto 4-12% SDS-PAGE. The proteins were transferred to a PVDF membrane and subjected to Western blot analysis using 1µg/ml of HP3/17. Purified recombinant human heparanase served as a control (left lane), where the 65 kDa precursor and the 50 kDa subunits are clearly detected.

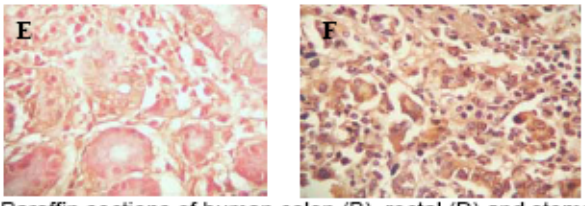
Colon x400



Rectum x200

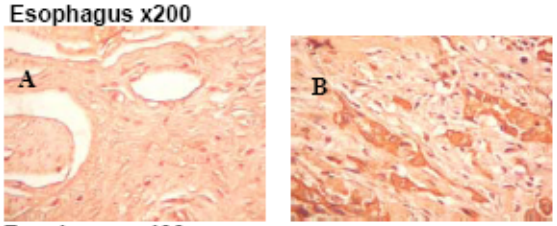


Stomach x400

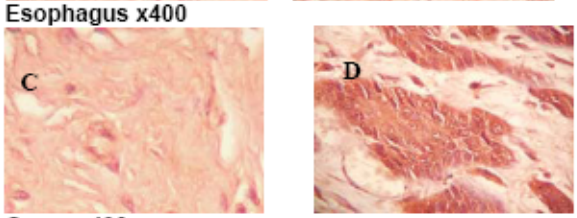


Paraffin sections of human colon (B), rectal (D) and stomach (E) adenocarcinoma, and normal counter-tissues from the same patient (A, C, E) were immunostained with 100 µg/ml of HP3/17.

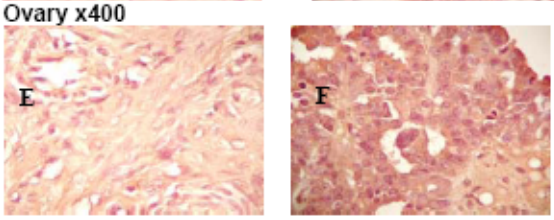
Esophagus x200



Esophagus x400

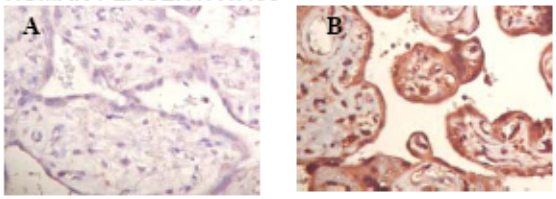


Ovary x400



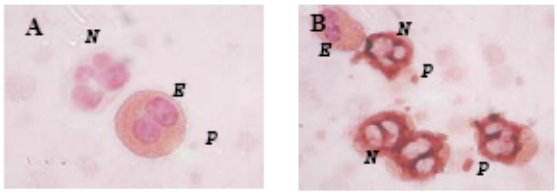
Paraffin sections of human esophageal squamous cell carcinoma (B and D), ovarian cystadenocarcinoma (F) and normal counter-tissues from the same patient (A, C, E) were immunostained with 100 µg/ml of HP3/17.

HUMAN PLACENTA x400



Paraffin sections of human placenta were stained with monoclonal human anti mouse IgG3 (A) or with HP3/17 (B) (x400).

BLOOD SMEAR x1000



Human blood smears were stained with 10µg/ml of HP3/17 (B) or without 1^0 mAb (A). Note the strong staining of neutrophils (N) and platelets (P), while eosinophils (E) and lymphocytes are not stained.

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