InSight

Polyclonal Rabbit Anti-Human Heparanase 1 (HPA1) Antibody

Catalog Number: *INS-26-2-0000-11 (0.29 mg)*
*INS-**26-2-0000-12 (0.57 mg)***

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 (1,2,3). 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 a 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).

SOURCE

Polyclonal rabbit anti-human HPA1 is a Protein G affinity purified polyclonal antibody raised against the 50 kDa-8 kDa Heparanase heterodimer.

PRODUCT

Each vial contains 0.29 mg or 0.57 mg of antibody in 50 or 100 μL, respectively, of 20 mM sodium phosphate; 150 mM NaCl; pH 7.2, containing 0. 01% Thimerosal.

APPLICATIONS

Western blot
Immunohistochemistry

SPECIFICITY

Western blot analysis: The antibody reacts with the 65 kDa precursor as well as the 50 kDa and 8 kDa subunits of human or mouse Heparanase.
Immunohistochemistry: The antibody interacts with Heparanase in paraffin sections and blood smears.
Recommended dilution range for Western blot analysis: 1:2000.
Recommended dilution range for immunohistochemistry: 1:100.

STORAGE

Store at 4^0C. For extended storage, freeze in working aliquots at -20^0C.
Avoid repeated freeze-thaw cycles.

RESEARCH USE

For *in vitro* research use only. Not for use in diagnostic procedures.

PATENTS

Polyclonal and monoclonal Anti-heparanase antibodies and their uses are protected by US. Patents No. 6,177,545; 6,531,129, additional US patent applications and patents and patent applications worldwide.

REFERENCES

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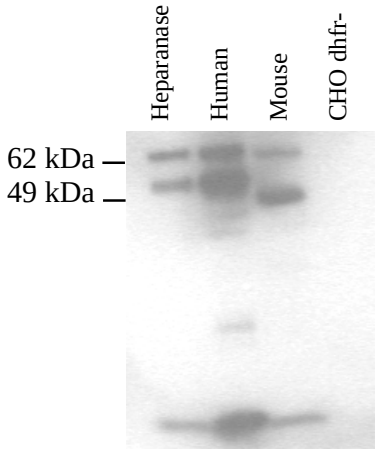
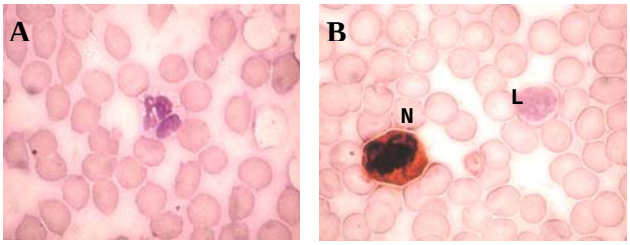
PERFORMANCE



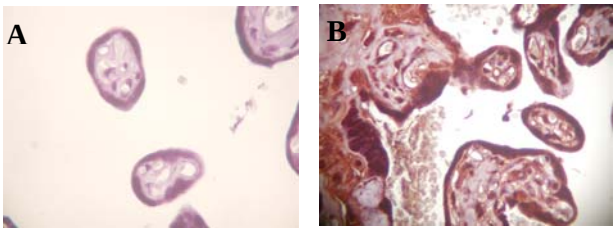
An extract from 6.5 x 10^3 CHO cells, transfected with human Heparanase, extract from 8 x 10^4 CHO cells, transfected with mouse Heparanase, and an extract from 5 x 10^5 non-transfected CHO dhfr$^-$ cells, were loaded onto 4-12% NuPage gel. The proteins were transferred to a PVDF membrane and subjected to Western blot analysis using 1:2000 polyclonal rabbit anti-human HPA1. Purified recombinant human heparanase served as a control (left lane), where the 65-kDa precursor and the 50-kDa and 8-kDa subunits are clearly detected.

BLOOD SMEAR x1000



Human blood smears were stained with 1:100 of polyclonal rabbit anti-human HPA1(B) or without 1^0 Poly Ab (A). Note the strong staining of Neutrophils (N), while lymphocytes (L) are not stained.

HUMAN PLACENTA x 400



Paraffin sections of human placenta were stained with 1:100 of polyclonal rabbit anti-human HPA1 (B) or without 1^0 Poly Ab (A).

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