

Anti-Heparanase 1 Picoband Antibody

Catalog # ABO10177

Product Information

Application	WB
Primary Accession	Q6YGZ1
Host	Rabbit
Reactivity	Mouse
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Heparanase(Hpse) detection. Tested with WB in Mouse.

Reconstitution Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	15442
Other Names	Heparanase, 3.2.1.166, Endo-glucoronidase, Heparanase 8 kDa subunit, Heparanase 50 kDa subunit, Hpse, Hpa
Calculated MW	60066
Application Details	Western blot, 0.1-0.5 µg/ml, Mouse
Subcellular Localization	Lysosome membrane ; Peripheral membrane protein . Secreted . Nucleus . Proheparanase is secreted via vesicles of the Golgi. Interacts with cell membrane heparan sulfate proteoglycans (HSPGs). Endocytosed and accumulates in endosomes. Transferred to lysosomes where it is proteolytically cleaved to produce the active enzyme. Under certain stimuli, transferred to the cell surface. Colocalizes with SDC1 in endosomal/lysosomal vesicles. Accumulates in perinuclear lysosomal vesicles. Heparin retains proheparanase in the extracellular medium (By similarity). Associates with lipid rafts. .
Tissue Specificity	Expressed in skin, mainly in the stratum granulosum and the first layer of the stratum corneum in the upper part of the epidermis. Also detected in hair follicles and in sebaceous glands. .
Source	Eukaryota
Protein Name	Heparanase
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived mouse Heparanase 1 recombinant protein (Position:

K206-K457). Mouse Heparanase 1 shares 80.2% and 96.4% amino acid (aa) sequence identity with human and rat Heparanase 1, respectively.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name	Hpse
Synonyms	Hpa
Function	Endoglycosidase that cleaves heparan sulfate proteoglycans (HSPGs) into heparan sulfate side chains and core proteoglycans. Participates in extracellular matrix (ECM) degradation and remodeling. Selectively cleaves the linkage between a glucuronic acid unit and an N-sulfo glucosamine unit carrying either a 3-O-sulfo or a 6-O-sulfo group. Can also cleave the linkage between a glucuronic acid unit and an N-sulfo glucosamine unit carrying a 2-O-sulfo group, but not linkages between a glucuronic acid unit and a 2-O-sulfated iduronic acid moiety. It is essentially inactive at neutral pH but becomes active under acidic conditions such as during tumor invasion and in inflammatory processes. Facilitates cell migration associated with metastasis, wound healing and inflammation. Enhances shedding of syndecans, and increases endothelial invasion and angiogenesis in myelomas. Acts as a procoagulant by increasing the generation of activation factor X in the presence of tissue factor and activation factor VII. Increases cell adhesion to the extracellular matrix (ECM), independent of its enzymatic activity. Induces AKT1/PKB phosphorylation via lipid rafts increasing cell mobility and invasion. Heparin increases this AKT1/PKB activation. Regulates osteogenesis. Enhances angiogenesis through up-regulation of SRC-mediated activation of VEGF. Implicated in hair follicle inner root sheath differentiation and hair homeostasis.
Cellular Location	Lysosome membrane; Peripheral membrane protein. Secreted Nucleus. Note=Proheparanase is secreted via vesicles of the Golgi. Interacts with cell membrane heparan sulfate proteoglycans (HSPGs). Endocytosed and accumulates in endosomes Transferred to lysosomes where it is proteolytically cleaved to produce the active enzyme. Under certain stimuli, transferred to the cell surface. Colocalizes with SDC1 in endosomal/lysosomal vesicles Accumulates in perinuclear lysosomal vesicles. Heparin retains proheparanase in the extracellular medium (By similarity). Associates with lipid rafts.
Tissue Location	Expressed in skin, mainly in the stratum granulosum and the first layer of the stratum corneum in the upper part of the epidermis. Also detected in hair follicles and in sebaceous glands

Background

Heparanase, also known as HPSE, is an enzyme that acts both at the cell-surface and within the extracellular matrix to degrade polymeric heparan sulfate molecules into shorter chain length oligosaccharides. Heparanase is an endo-beta-D-glucuronidase capable of cleaving heparan sulfate and has been implicated in inflammation and tumor angiogenesis and metastasis. The successful penetration of the endothelial cell

layer that lines the interior surface of blood vessels is an important process in the formation of blood borne tumour metastases. Heparan sulfate proteoglycans are major constituents of this layer and it has been shown that increased metastatic potential corresponds with increased heparanase activity for a number of cell lines.

Images

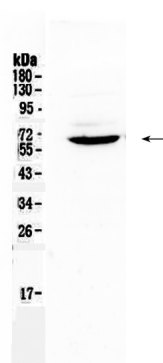


Figure 1. Western blot analysis of Heparanase 1 using anti-Heparanase 1 antibody (ABO10177). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: mouse spleen tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Heparanase 1 antigen affinity purified polyclonal antibody (Catalog # ABO10177) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Heparanase 1 at approximately 65KD. The expected band size for Heparanase 1 is at 61KD.

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