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HPSE antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI14561

Product Information

Application	WB
Primary Accession	Q9Y251
Other Accession	NM_006665, NP_006656
Reactivity	Human, Mouse, Rat, Rabbit, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	61149

Additional Information

Gene ID	10855
Alias Symbol	HPA, HPR1, HPSE1, HSE1, HPA1
Other Names	Heparanase, 3.2.1.166, Endo-glucoronidase, Heparanase-1, Hpa1, Heparanase 8 kDa subunit, Heparanase 50 kDa subunit, HPSE, HEP, HPA, HPA1, HPR1, HPSE1, HSE1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-HPSE antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	HPSE antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HPSE
Synonyms	HEP, HPA, HPA1, HPR1, HPSE1, HSE1
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 Associates with lipid rafts. Colocalizes with SDC1 in endosomal/lysosomal vesicles. Accumulates in perinuclear lysosomal vesicles. Heparin retains proheparanase in the extracellular medium (By similarity).

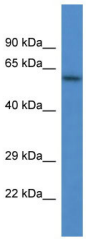
Tissue Location

Highly expressed in placenta and spleen and weakly expressed in lymph node, thymus, peripheral blood leukocytes, bone marrow, endothelial cells, fetal liver and tumor tissues. Also expressed in hair follicles, specifically in both Henle's and Huxley's layers of inner the root sheath (IRS) at anagen phase

References

Kussie P.H.,et al.Biochem. Biophys. Res. Commun. 261:183-187(1999).
Toyoshima M.,et al.J. Biol. Chem. 274:24153-24160(1999).
Vlodavsky I.,et al.Nat. Med. 5:793-802(1999).
Hulett M.D.,et al.Nat. Med. 5:803-809(1999).
Dempsey L.A.,et al.Glycobiology 10:467-475(2000).

Images



WB Suggested Anti-HPSE Antibody Titration: 1.0 µg/ml
Positive Control: Jurkat Whole Cell