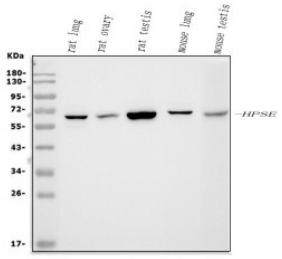
Heparanase 1 Antibody / HPSE Antibody (R32358)

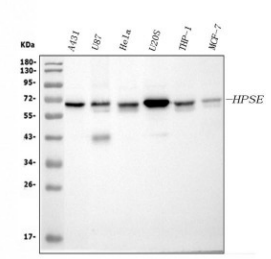
Catalog No.	Formulation	Size
R32358	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q9Y251
Applications	Western blot: 0.5-1ug/ml
Limitations	This Heparanase 1 Antibody / HPSE Antibody is available for research use only.



Heparanase 1 Antibody Mouse and Rat WB. Western blot testing of rat lung (lane 1), rat ovary (lane 2), rat testis (lane 3), mouse lung (lane 4), and mouse testis (lane 5) lysates using Heparanase 1 antibody detected a specific band at approximately 61 kDa, consistent with the expected molecular weight of mature HPSE. The strongest signal was observed in testis lysates, in agreement with the relatively high expression of heparanase reported in reproductive tissues. This Heparanase 1 Antibody, also called an HPSE Antibody, is useful for investigating extracellular matrix remodeling, heparan sulfate metabolism, angiogenesis, inflammation, and cancer progression.



Heparanase 1 Antibody Human Cancer Cell WB. Western blot testing of human A431 (lane 1), U87 (lane 2), HeLa (lane 3), U2OS (lane 4), THP-1 (lane 5), and MCF-7 (lane 6) cell lysates using Heparanase 1 antibody detected a prominent band at approximately 61 kDa, consistent with the expected molecular weight of the mature active form of HPSE. Heparanase is synthesized as a latent precursor that undergoes proteolytic processing to generate the enzymatically active protein responsible for heparan sulfate degradation. This Heparanase 1 Antibody, also called an HPSE Antibody, is useful for investigating extracellular matrix remodeling, angiogenesis, inflammation, tumor invasion, and cancer progression.

Description

Heparanase 1 Antibody / HPSE Antibody recognizes heparanase (HPSE), the only known mammalian endo-beta-D-glucuronidase capable of cleaving heparan sulfate chains within heparan sulfate proteoglycans of the extracellular matrix and basement membrane. By remodeling these structural barriers, HPSE regulates cell migration, tissue repair, leukocyte trafficking, and the release of numerous heparan sulfate-bound growth factors, cytokines, and chemokines. These activities position heparanase as a central mediator of extracellular matrix remodeling and cell signaling in both normal physiology and disease.

HPSE is synthesized as a latent precursor that undergoes proteolytic processing within lysosomes to generate the mature, enzymatically active heterodimer. Active heparanase promotes extracellular matrix degradation while liberating signaling molecules including vascular endothelial growth factor, fibroblast growth factors, hepatocyte growth factor, and transforming growth factor beta. Through these mechanisms, HPSE influences angiogenesis, inflammation, wound healing, immune cell recruitment, and tissue remodeling. In addition to its enzymatic activity, heparanase also participates in signaling pathways that regulate cell adhesion, proliferation, and survival.

Increased HPSE expression has been documented in numerous malignancies including melanoma, breast, colorectal, pancreatic, gastric, lung, and hematologic cancers. Elevated heparanase activity is associated with tumor invasion, metastatic dissemination, angiogenesis, and poor clinical prognosis by facilitating degradation of basement membranes and promoting a tumor-supportive microenvironment. Beyond oncology, HPSE has been implicated in inflammatory diseases, diabetic nephropathy, fibrosis, viral infection, and other disorders involving extracellular matrix remodeling. Consequently, heparanase has emerged as an important biomarker and therapeutic target in cancer biology, immunology, and regenerative medicine.

Ongoing research continues to reveal additional functions of HPSE in cell signaling, exosome biology, vascular permeability, and immune regulation, expanding its importance beyond extracellular matrix degradation alone. A Heparanase 1 Antibody is a valuable research tool for investigating HPSE, extracellular matrix remodeling, heparan sulfate biology, angiogenesis, inflammation, and cancer progression.

Explore additional reagents for tumor progression, invasion, and metastasis research on our Cancer Marker Antibodies page.

Application Notes

Optimal dilution of the Heparanase 1 Antibody / HPSE Antibody should be determined by the researcher.

Immunogen

Amino acids NGRTATKEDFLNPDVLDIFISSVQKVFQVVE of human Heparanase 1 were used as the immunogen for the Heparanase 1 antibody.

Storage

After reconstitution, the Heparanase 1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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