

Product datasheet

Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A74] ab23418

★★★★★ 6 Abreviews 9 References 2 Images

Overview

Product name	Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A74]
Description	Mouse monoclonal [A74] to Heparan Sulfate Proteoglycan 2/Perlecan
Host species	Mouse
Specificity	ab23418 is highly specific for perlecan. There is no evidence for cross-reactivity with other connective tissue proteins (vitronectin, fibronectin, elastin, collagen, laminin).
Tested applications	Suitable for: IHC-P, ICC/IF, WB, IP, IHC-Fr, ELISA
Species reactivity	Reacts with: Cow, Human
Immunogen	Tissue, cells or virus corresponding to Cow Heparan Sulfate Proteoglycan 2/Perlecan.
Epitope	Epitope is located in domain V of Perlecan.
General notes	This product was previously labelled as Heparan Sulfate Proteoglycan 2

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.097% Sodium azide Constituents: 0.0268% PBS, 2.9% Sodium chloride
Purity	Protein G purified
Clonality	Monoclonal
Clone number	A74
Myeloma	Sp2/0
Isotype	IgG1

Applications

Our [Abpromise guarantee](#) covers the use of **ab23418** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★☆	Use at an assay dependent concentration. PubMed: 22278369
ICC/IF	★★★★★	Use at an assay dependent concentration.
WB	★★★★☆	1/100. Predicted molecular weight: 469 kDa.
IP		Use at an assay dependent concentration.
IHC-Fr		1/100.
ELISA		1/2000.
AP		Use at an assay dependent concentration. Can be used to separate recombinant domain I from full length perlecan.

Target

Function

Integral component of basement membranes. Component of the glomerular basement membrane (GBM), responsible for the fixed negative electrostatic membrane charge, and which provides a barrier which is both size- and charge-selective. It serves as an attachment substrate for cells. Plays essential roles in vascularization. Critical for normal heart development and for regulating the vascular response to injury. Also required for avascular cartilage development. Endorepellin in an anti-angiogenic and anti-tumor peptide that inhibits endothelial cell migration, collagen-induced endothelial tube morphogenesis and blood vessel growth in the chorioallantoic membrane. Blocks endothelial cell adhesion to fibronectin and type I collagen. Anti-tumor agent in neovascularization. Interaction with its ligand, integrin alpha2/beta1, is required for the anti-angiogenic properties. Evokes a reduction in phosphorylation of receptor tyrosine kinases via alpha2/beta1 integrin-mediated activation of the tyrosine phosphatase, PTPN6. The LG3 peptide has anti-angiogenic properties that require binding of calcium ions for full activity.

Tissue specificity

Found in the basement membranes.

Involvement in disease

Defects in HSPG2 are the cause of Schwartz-Jampel syndrome (SJS1) [MIM:255800]; a rare autosomal recessive disorder characterized by permanent myotonia (prolonged failure of muscle relaxation) and skeletal dysplasia, resulting in reduced stature, kyphoscoliosis, bowing of the diaphyses and irregular epiphyses.

Defects in HSPG2 are the cause of dyssegmental dysplasia Silverman-Handmaker type (DDSH) [MIM:224410]. The dyssegmental dysplasias are rare, autosomal recessive skeletal dysplasias with anisospondyly and micromelia. There are two recognized types: the severe, lethal DDSH and the milder Rolland-Desbuquois form. Individuals with DDSH also have a flat face, micrognathia, cleft palate and reduced joint mobility, and frequently have an encephalocoele. The endochondral growth plate is short, the calcospherites (which are spherical calcium-phosphorus crystals produced by hypertrophic chondrocytes) are unfused, and there is mucoid degeneration of the resting cartilage.

Sequence similarities

Contains 4 EGF-like domains.

Contains 22 Ig-like C2-type (immunoglobulin-like) domains.

Contains 11 laminin EGF-like domains.
Contains 3 laminin G-like domains.
Contains 3 laminin IV type A domains.
Contains 4 LDL-receptor class A domains.
Contains 1 SEA domain.

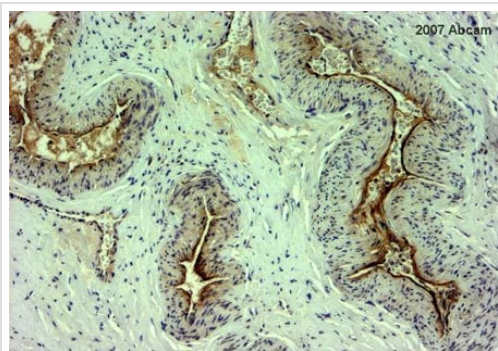
Post-translational modifications

Proteolytic processing produces the C-terminal angiogenic peptide, endorepellin. This peptide can be further processed to produce the LG3 peptide.
N- and O-glycosylated; contains three heparan sulfate chains. The LG3 peptide contains at least three and up to five potential O-glycosylation sites but no N-glycosylation.

Cellular localization

Secreted > extracellular space > extracellular matrix > basement membrane.

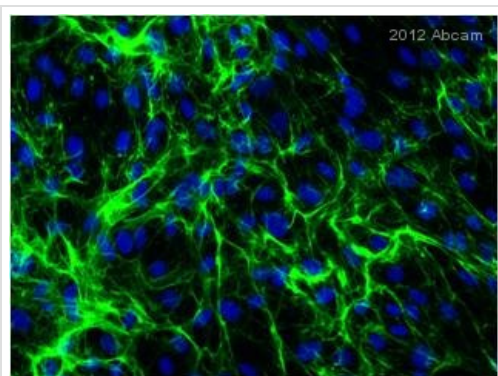
Images



Immunohistochemical analysis of Human ovary tissue, staining Heparan Sulfate Proteoglycan 2/Perlecan with ab23418.

Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation. Samples were incubated with primary antibody (1/10 in diluent) for 30 minutes. An HRP-conjugated anti-mouse IgG was used as the secondary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A74] (ab23418)
This image is courtesy of an Abreview submitted by Mr Rudolf Jung



ab23418 staining Heparan Sulfate Proteoglycan 2/Perlecan in Human fibroblasts by ICC/IF (Immunocytochemistry/immunofluorescence).

Cells were fixed with methanol, permeabilized with 1% Triton X-100 and blocked with 5% BSA for 20 minutes at 22°C. Samples were incubated with primary antibody (1/600 in diluent) for 12 hours at 4°C. An AlexaFluor®488-conjugated goat anti-mouse monoclonal (1/200) was used as the secondary antibody.

Immunocytochemistry/ Immunofluorescence - Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A74] (ab23418)
This image is courtesy of an anonymous Abreview

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