abcam

Product datasheet

Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A7L6] ab2501

★★★★★ 10 Abreviews 28 References 2 Images

Overview

Product name	Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A7L6]
Description	Rat monoclonal [A7L6] to Heparan Sulfate Proteoglycan 2/Perlecan
Host species	Rat
Specificity	Recognizes domain IV of heparan sulphate proteoglycan 2 / perlecan. The reactivity is independent of the galactosaminoglycan moieties. Therefore, the epitope is not sensitive to heparitinase treatment.
Tested applications	**Suitable for:** ICC, IHC-P, IP, IHC-Fr, WB
Species reactivity	**Reacts with:** Mouse, Rat, Cow, Human, Pig, Fish
Immunogen	Tissue, cells or virus corresponding to Heparan Sulfate Proteoglycan 2/Perlecan. High molecular mass material derived from the Engelbreth-Holm-Swarm (EHS) tumor matrix containing laminin, entactin and HSPG. Database link: **P98160**
General notes	Proteoglycans are macromolecules consisting of a variety of core proteins with covalently attached one or several polysaccharide chains of the glycosaminoglycan type (heparan sulphate, heparin, chondroitin sulphate, dermatan sulphate or keratan sulphate). At least two forms of basement membrane heparan sulphate proteoglycan (HSPG) have been identified. One with a large core protein (> 400 kD) and one with a small core protein (30 kD). The large HSPG is probably the most abundant basement membrane proteoglycan. It is located predominantly in the lamina lucida, where it forms clustered aggregates and interacts with other basement membrane components to form the matrix. In addition, it also plays a critical role in attachment of cells to the basal membrane via integrin receptors. **Source:** A7L6 is a Rat monoclonal IgG2a antibody derived by fusion of X63 Ag8.653 Mouse myeloma cells with spleen cells from a Fisher Rat immunized with high molecular mass material derived from the Engelbreth-Holm-Swarm (EHS) tumor matrix containing laminin, entactin and HSPG. **Formulation:** The vial contains 100 ul 1 mg/ml monoclonal purified antibody in PBS containing 0.09% sodium azide. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 0.1% BSA
Purity	Protein A purified
Primary antibody notes	Proteoglycans are macromolecules consisting of a variety of core proteins with covalently attached one or several polysaccharide chains of the glycosaminoglycan type (heparan sulphate, heparin, chondroitin sulphate, dermatan sulphate or keratan sulphate). At least two forms of basement membrane heparan sulphate proteoglycan (HSPG) have been identified. One with a large core protein (> 400 kD) and one with a small core protein (30 kD). The large HSPG is probably the most abundant basement membrane proteoglycan. It is located predominantly in the lamina lucida, where it forms clustered aggregates and interacts with other basement membrane components to form the matrix. In addition, it also plays a critical role in attachment of cells to the basal membrane via integrin receptors.
Clonality	Monoclonal
Clone number	A7L6
Myeloma	x63-Ag8.653
Isotype	IgG2a

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2501 in the following tested applications.

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

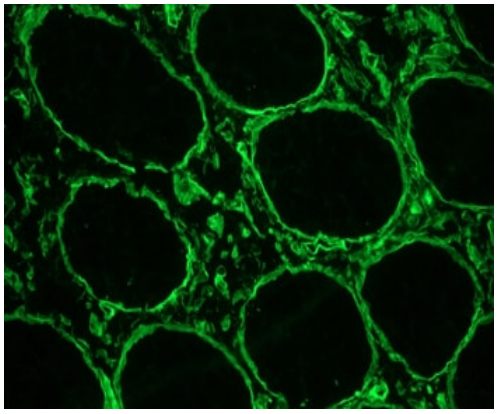
Application	Abreviews	Notes
ICC		Use at an assay dependent concentration. Use amplification with ABC (avidin biotin complex).
IHC-P	★★★★★ (6)	Use at an assay dependent concentration. Use amplification with ABC (avidin biotin complex).
IP		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration.

Target

Target

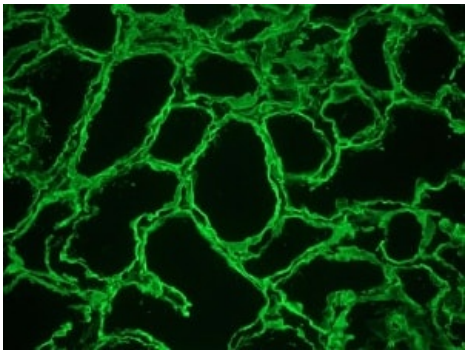
Function	Integral component of basement membranes. Component of the glomerular basement membrane (GBM), responsible for the fixed negative electrostatic membrane charge, and which provides a barrier which is both size- and charge-selective. It serves as an attachment substrate for cells. Plays essential 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



Immunohistochemistry (Frozen sections) - Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A7L6] (ab2501)

IHC image on a frozen section of human colon showing strong reactivity in the extracellular matrix and basement membrane.



Immunohistochemistry (Frozen sections) - Anti-Heparan Sulfate Proteoglycan 2/Perlecan antibody [A7L6] (ab2501)

Immunohistochemistry on frozen section of Human kidney showing strong reactivity in the extracellular matrix and basement membrane.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors