

# Perlecan (A7L6): sc-33707

## BACKGROUND

Perlecan is part of a large family of heparan sulfate proteoglycans (HSPGs). As key components of cell surfaces and extracellular matrices, HSPGs modulate growth factor activities and thereby influence cell growth and differentiation. Additionally, HSPGs play a critical role in regulating tumor cell metastasis by mediating cell adhesion and the activities of growth and angiogenic factors. Perlecan consists of five distinct structural domains that interact with a number of matrix molecules, cytokines and growth factors to influence cartilage development and neuromuscular junction activity. Antithrombin, a key regulator of blood coagulation proteases, and TGF $\beta$ 1 act as inhibitors and stimulators of Perlecan expression, respectively, interactions which may provide avenues for therapeutic intervention in certain types of cancer.

## CHROMOSOMAL LOCATION

Genetic locus: HSPG2 (human) mapping to 1p36.12; Hspg2 (mouse) mapping to 4 D3.

## SOURCE

Perlecan (A7L6) is a rat monoclonal antibody raised against partially purified preparation of laminin from the EHS mouse tumor.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Perlecan (A7L6) is available conjugated to agarose (sc-33707 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33707 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33707 PE), fluorescein (sc-33707 FITC), Alexa Fluor<sup>®</sup> 488 (sc-33707 AF488), Alexa Fluor<sup>®</sup> 546 (sc-33707 AF546), Alexa Fluor<sup>®</sup> 594 (sc-33707 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-33707 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-33707 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-33707 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Perlecan (A7L6) is recommended for detection of Perlecan of mouse, rat human, porcine, bovine, monkey and fish origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Perlecan siRNA (h): sc-44010, Perlecan siRNA (m): sc-44394, Perlecan shRNA Plasmid (h): sc-44010-SH, Perlecan shRNA Plasmid (m): sc-44394-SH, Perlecan shRNA (h) Lentiviral Particles: sc-44010-V and Perlecan shRNA (m) Lentiviral Particles: sc-44394-V.

Molecular Weight of Perlecan: 400 kDa.

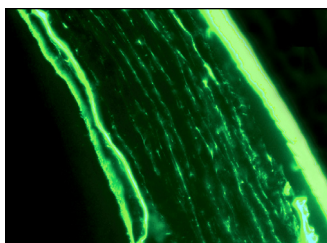
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



Perlecan (A7L6): sc-33707. Immunofluorescence staining of normal mouse eye frozen section showing basement membrane, stroma and Descemet's membrane staining.

## SELECT PRODUCT CITATIONS

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- Pócsai, K., et al. 2010. Components of the basal lamina and dystrophin-dystroglycan complex in the neurointermediate lobe of rat pituitary gland: different localizations of  $\beta$ -dystroglycan, dystrobrevins,  $\alpha$ 1-syntrophin, and aquaporin-4. *J. Histochem. Cytochem.* 58: 463-479.
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- Warren, C.R., et al. 2014. Transcriptional activation by NF $\kappa$ B increases Perlecan/HSPG2 expression in the desmoplastic prostate tumor microenvironment. *J. Cell. Biochem.* 115: 1322-1333.
- Neu, C.P., et al. 2015. Optical clearing in collagen- and proteoglycan-rich osteochondral tissues. *Osteoarthritis Cartilage* 23: 405-413.
- Xu, X., et al. 2016. Knockdown of the pericellular matrix molecule Perlecan lowers *in situ* cell and matrix stiffness in developing cartilage. *Dev. Biol.* 418: 242-247.
- Vögtle, T., et al. 2019. Heparan sulfates are critical regulators of the inhibitory megakaryocyte-platelet receptor G6b-B. *Elife* 8: e46840.
- DeDreu, J., et al. 2020. An immune response to the avascular lens following wounding of the cornea involves ciliary zonule fibrils. *FASEB J.* 34: 9316-9336.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.