SANTA CRUZ BIOTECHNOLOGY, INC.

Perlecan (E-6): sc-377219

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TGFβ1 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.

SOURCE

Perlecan (E-6) is a mouse monoclonal antibody raised against amino acids 4092-4391 mapping near the C-terminus of Perlecan of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Perlecan (E-6) is available conjugated to agarose (sc-377219 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377219 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377219 PE), fluorescein (sc-377219 FITC), Alexa Fluor® 488 (sc-377219 AF488), Alexa Fluor® 546 (sc-377219 AF546), Alexa Fluor® 594 (sc-377219 AF594) or Alexa Fluor® 647 (sc-377219 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377219 AF680) or Alexa Fluor® 790 (sc-377219 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Perlecan (E-6) is recommended for detection of Perlecan of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of Perlecan: 400 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or K-562 whole cell lysate: sc-2203.

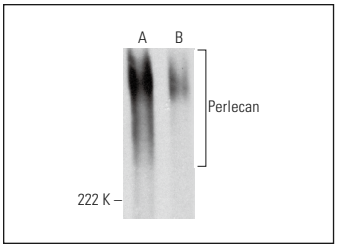
STORAGE

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

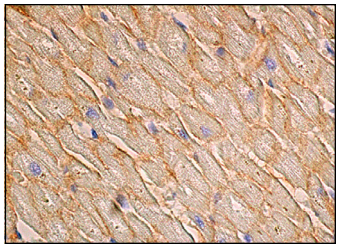
RESEARCH USE

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

DATA



Perlecan (E-6): sc-377219. Western blot analysis of Perlecan expression in HeLa nuclear extract (**A**) and K-562 whole cell lysate (**B**).



Perlecan (E-6): sc-377219. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing membrane and cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

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2. Danalache, M., et al. 2019. Changes in stiffness and biochemical composition of the pericellular matrix as a function of spatial chondrocyte organisation in osteoarthritic cartilage. Osteoarthritis Cartilage 27: 823-832.
3. Danalache, M., et al. 2020. Biochemical changes of the pericellular matrix and spatial chondrocyte organization-two highly interconnected hallmarks of osteoarthritis. J. Orthop. Res. 38: 2170-2180.
4. Hara, T., et al. 2020. Cell density-dependent modulation of Perlecan synthesis by dichloro(2,9-dimethyl-1,10-phenanthroline)zinc(II) in vascular endothelial cells. J. Toxicol. Sci. 45: 109-115.
5. Ng, C.Y., et al. 2021. Macrophages bind LDL using heparan sulfate and the perlecan protein core. J. Biol. Chem. 296: 100520.
6. Sampaio, L.P., et al. 2021. Descemet's membrane injury and regeneration, and posterior corneal fibrosis in rabbits. Exp. Eye Res. 213: 108803.
7. Hajal, C., et al. 2022. Engineered human blood-brain barrier microfluidic model for vascular permeability analyses. Nat. Protoc. 17: 95-128.
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9. Shiju, T.M., et al. 2023. Corneal epithelial basement membrane assembly is mediated by epithelial cells in coordination with corneal fibroblasts during wound healing. Mol. Vis. 29: 68-86.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.