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Heparan Sulfate Proteoglycan (Large) / Perlecan Antibody - With BSA and Azide

Rat Monoclonal Antibody [Clone SPM255]
Catalog # AH11474

Product Information

Application	IHC, IF, FC
Primary Accession	P98160
Other Accession	3339, 562227
Reactivity	Human, Mouse, Monkey, Pig, Bovine, Fish
Host	Rat
Clonality	Monoclonal
Isotype	Rat / IgG2a, kappa
Clone Names	SPM255
Calculated MW	468830

Additional Information

Gene ID	3339
Other Names	Basement membrane-specific heparan sulfate proteoglycan core protein, HSPG, Perlecan, PLC, Endorepellin, LG3 peptide, HSPG2
Application Note	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Heparan Sulfate Proteoglycan (Large) / Perlecan Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HSPG2
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 (PubMed:12435733, PubMed:15591058, PubMed:19789387). In muscle, it is essential for localizing acetylcholinesterase (AChE) at the neuromuscular junctions (NMJ), most probably acting as an adapter that links the acetylcholinesterase collagenic tail peptide (COLQ) to alpha- dystroglycan, and is therefore involved in the

	down-regulation of colinergic synaptic transmission (By similarity). [LG3 peptide]: Has anti-angiogenic properties that require binding of calcium ions for full activity.
Cellular Location	Secreted, extracellular space, extracellular matrix, basement membrane. Secreted
Tissue Location	Detected in cerebrospinal fluid, fibroblasts and urine (at protein level).

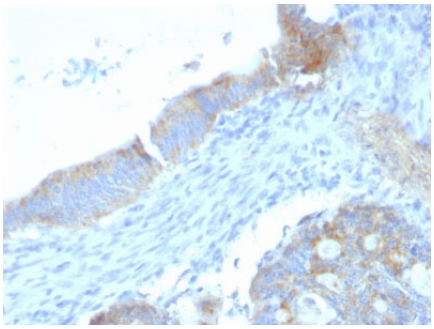
Background

This MAb specifically precipitates heterogeneous material of high MW, identified as perlecan, a major heparan-sulfate proteoglycan (HSPG) within all basement membranes and cell surfaces. It does not cross-react with laminin, fibronectin, or dermatran sulfate proteoglycan. Because of perlecan s strategic location and ability to store and protect growth factors, it has been strongly implicated in the control of tumor cell growth and metastatic behavior. Perlecan possesses angiogenic and growth-promoting attributes primarily by acting as a co-receptor for basic fibroblast growth factor (FGF-2). Suppression of perlecan causes substantial inhibition of neoplastic growth and neovascularization. Thus, perlecan is a potent inducer of neoplasm growth and angiogenesis in vivo and therapeutic interventions targeting this key modulator of tumor progression may improve neoplastic treatment.

References

Folkvord et. al., J Histochem Cytochem, 1989; 37:105-113. | Couchman et. al., Matrix, 1989; 9:311-321. | Horiguchi et. al., J Histochem Cytochem, 1989; 37:961-970. | Ljubimov et. al., Int J Cancer, 1992; 50:562-566. | Guelstein et. al., Int J Cancer, 1993; 53:269-277. | Ljubimov et. al., Lab Invest, 1995; 72:461-473. |

Images



Formalin-fixed, paraffin-embedded human Testicular Carcinoma stained with Heparan Sulfate Monoclonal Antibody (SPM255).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.