ARG42647
anti-Heparan Sulfate Proteoglycan 2 / Perlecan antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Heparan Sulfate Proteoglycan 2 / Perlecan
Tested Reactivity	Hu
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Heparan Sulfate Proteoglycan 2 / Perlecan
Species	Human
Immunogen	Recombinant protein corresponding to F524-K701 of Human Heparan Sulfate Proteoglycan 2 / Perlecan.
Conjugation	Un-conjugated
Alternate Names	PRCAN; Perlecan; SJS; SJS1; HSPG; PLC; SJA; Basement membrane-specific heparan sulfate proteoglycan core protein

Application Instructions

Application table

Application	Dilution
IHC-P	1:200 - 1:1000
WB	1:500 - 1:2000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

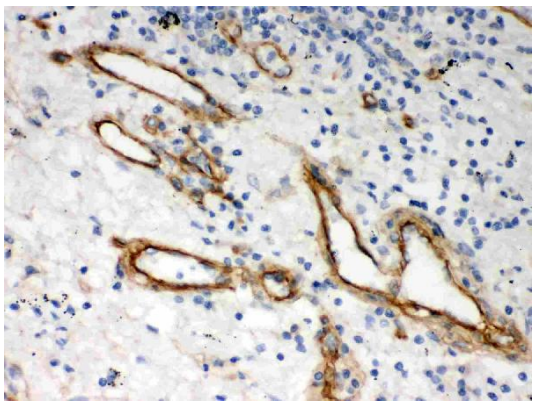
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na2HPO4, 0.9% NaCl, 0.05% Sodium azide and 5% BSA.
Preservative	0.05% Sodium azide
Stabilizer	5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

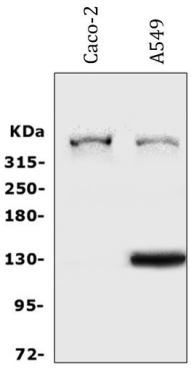
Gene Symbol	HSPG2
Gene Full Name	heparan sulfate proteoglycan 2
Background	This gene encodes the perlecan protein, which consists of a core protein to which three long chains of glycosaminoglycans (heparan sulfate or chondroitin sulfate) are attached. The perlecan protein is a large multidomain proteoglycan that binds to and cross-links many extracellular matrix components and cell-surface molecules. It has been shown that this protein interacts with laminin, prolargin, collagen type IV, FGFBP1, FBLN2, FGF7 and transthyretin, etc., and it plays essential roles in multiple biological activities. Perlecan is a key component of the vascular extracellular matrix, where it helps to maintain the endothelial barrier function. It is a potent inhibitor of smooth muscle cell proliferation and is thus thought to help maintain vascular homeostasis. It can also promote growth factor (e.g., FGF2) activity and thus stimulate endothelial growth and re-generation. It is a major component of basement membranes, where it is involved in the stabilization of other molecules as well as being involved with glomerular permeability to macromolecules and cell adhesion. Mutations in this gene cause Schwartz-Jampel syndrome type 1, Silverman-Handmaker type of dyssegmental dysplasia, and tardive dyskinesia. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, May 2014]
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. [UniProt]
Calculated Mw	469 kDa
PTM	Proteolytic processing produces the C-terminal angiogenic peptide, endorepellin. This peptide can be further processed to produce the LG3 peptide. N- and O-glycosylated. O-glycosylated with core 1 or possibly core 8 glycans. Perlecan contains three heparan sulfate chains. The LG3 peptide contains at least three and up to five potential O-glycosylation sites but no N-glycosylation. [UniProt]
Cellular Localization	Secreted, extracellular space, extracellular matrix, basement membrane. [UniProt]

Images



ARG42647 anti-Heparan Sulfate Proteoglycan 2 / Perlecan antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human lung cancer tissue stained with ARG42647 anti-Heparan Sulfate Proteoglycan 2 / Perlecan antibody.



ARG42647 anti-Heparan Sulfate Proteoglycan 2 / Perlecan antibody WB image

Western blot: 50 µg of samples under reducing conditions. Caco-2 and A549 whole cell lysates stained with ARG42647 anti-Heparan Sulfate Proteoglycan 2 / Perlecan antibody at 0.5 µg/ml dilution, overnight at 4°C.