ARG54841
anti-Collagen IV antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Collagen IV
Tested Reactivity	Hu, Ms
Tested Application	ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Collagen IV
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 27-54 (N-terminus) of Human Collagen IV alpha 1.
Conjugation	Un-conjugated
Alternate Names	BSVD; RATOR; Collagen alpha-1(IV) chain

Application Instructions

Application table

Application	Dilution
ICC/IF	1:25
WB	1:1000

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

Positive Control: HeLa

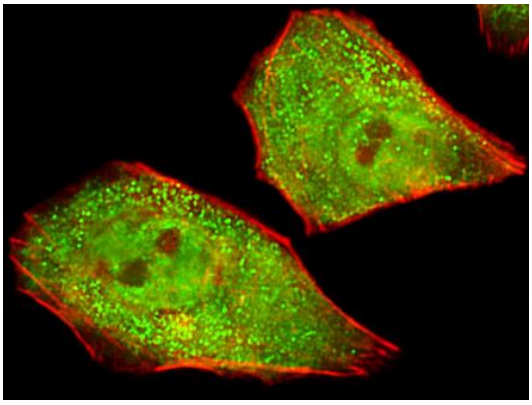
Properties

Form	Liquid
Purification	Purification with Protein A and immunogen peptide.
Buffer	PBS and 0.09% (W/V) Sodium azide
Preservative	0.09% (W/V) Sodium azide
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

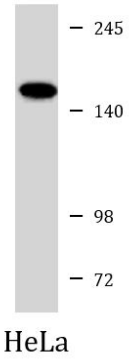
Database links	GeneID: 1282 Human GeneID: 12826 Mouse Swiss-port # P02462 Human Swiss-port # P02463 Mouse
Gene Symbol	COL4A1
Gene Full Name	collagen, type IV, alpha 1
Background	Collagen IV proteins are integral components of basement membranes. This gene shares a bidirectional promoter with a paralogous gene on the opposite strand. The protein consists of an amino-terminal 7S domain, a triple-helix forming collagenous domain, and a carboxy-terminal non-collagenous domain. It functions as part of a heterotrimer and interacts with other extracellular matrix components such as perlecans, proteoglycans, and laminins. In addition, proteolytic cleavage of the non-collagenous carboxy-terminal domain results in a biologically active fragment known as arresten, which has anti-angiogenic and tumor suppressor properties. Mutations in this gene cause porencephaly, cerebrovascular disease, and renal and muscular defects. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2014]
Function	Collagen IV is the major structural component of glomerular basement membranes (GBM), forming a 'chicken-wire' meshwork together with laminins, proteoglycans and entactin/nidogen. Arresten, comprising the C-terminal NC1 domain, inhibits angiogenesis and tumor formation. The C-terminal half is found to possess the anti-angiogenic activity. Specifically inhibits endothelial cell proliferation, migration and tube formation. Inhibits expression of hypoxia-inducible factor 1alpha and ERK1/2 and p38 MAPK activation. Ligand for alpha1/beta1 integrin. [UniProt]
Research Area	Angiogenesis Study antibody; Basement Membrane Marker antibody
Calculated Mw	161 kDa
PTM	Lysines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in all cases and bind carbohydrates. Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains. Type IV collagens contain numerous cysteine residues which are involved in inter- and intramolecular disulfide bonding. 12 of these, located in the NC1 domain, are conserved in all known type IV collagens. The trimeric structure of the NC1 domains is stabilized by covalent bonds between Lys and Met residues. Proteolytic processing produces the C-terminal NC1 peptide, arresten.
Cellular Localization	Secreted, extracellular space, extracellular matrix, basement membrane

Images



ARG54841 anti-Collagen IV antibody ICC/IF image

Immunofluorescence: U251 cells stained with ARG54841 anti-Collagen IV antibody (green) at 1:25 dilution. Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



ARG54841 anti-Collagen IV antibody WB image

Western blot: 35 µg of HeLa cell lysate stained with ARG54841 anti-Collagen IV antibody at 1:1000 dilution.