ARG21969
anti-Collagen IV antibody (Biotin), pre-adsorbed

Package: 50 µg
Store at: 4°C

Summary

Product Description	Biotin-conjugated Goat Polyclonal antibody recognizes Collagen IV
Tested Reactivity	Hu, Ms, Rat, Bov
Tested Application	ELISA, EM, FACS, FLISA, ICC/IF, IHC-Fr, IHC-P, WB
Specificity	The antibody reacts with conformational determinants on type IV collagen. The antibody is pre-adsorbed with Collagen types I, II, III, V and VI, so the antibody may not react with Collagen types I, II, III, V and VI.
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	Collagen IV
Species	Human
Immunogen	Human type IV collagen
Conjugation	Biotin
Alternate Names	BSVD; RATOR; Collagen alpha-1(IV) chain

Application Instructions

Pre Adsorbed	Collagen types I, II, III, V and VI.

Application table

Application	Dilution
ELISA	1:1000 - 1:4000
EM	Assay-dependent
FACS	Assay-dependent
FLISA	Assay-dependent
ICC/IF	Assay-dependent
IHC-Fr	Assay-dependent
IHC-P	Assay-dependent
WB	Assay-dependent

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	PBS and 0.1% Sodium azide.
Preservative	0.1% Sodium azide
Concentration	0.4 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. 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.