ARG21972
anti-Collagen IV antibody [2F11]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [2F11] recognizes Collagen IV
Tested Reactivity	Hu
Tested Application	ELISA, FLISA, IHC-Fr, IHC-P
Specificity	Human type IV collagen
Host	Mouse
Clonality	Monoclonal
Clone	2F11
Isotype	IgG1, kappa
Target Name	Collagen IV
Species	Human
Immunogen	Native Human type IV collagen
Conjugation	Un-conjugated
Alternate Names	BSVD; RATOR; Collagen alpha-1(IV) chain

Application Instructions

Application table

Application	Dilution
ELISA	Assay-dependent
FLISA	Assay-dependent
IHC-Fr	< 2 µg/ml
IHC-P	Assay-dependent

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

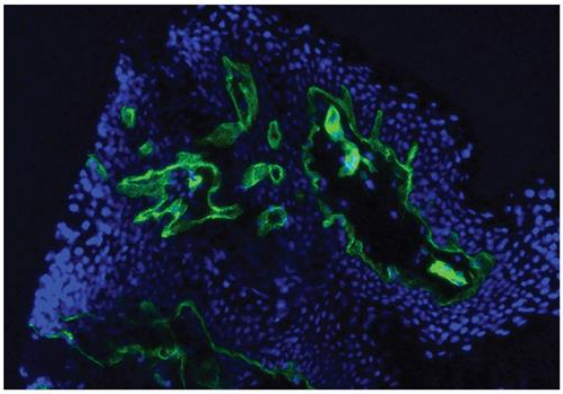
Properties

Form	Liquid
Buffer	BBS (pH 8.2)
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. 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

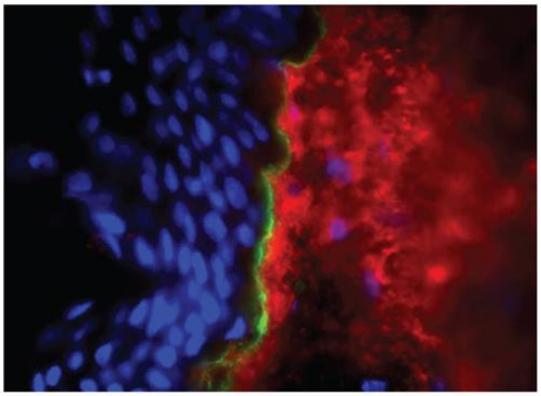
Database links	GeneID: 1282 Human Swiss-port # P02462 Human
Gene Symbol	COL4A1
Gene Full Name	collagen, type IV, alpha 1
Background	Collagen IV proteins are integral components of basement membranes. This gene shares a bidirectional promoter with a paralogous gene on the opposite strand. The protein 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]
Highlight	Related products: Collagen IV antibodies; Anti-Mouse IgG secondary antibodies; Related news: Vascular development is regulated by FGF-dependent metabolic control
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.

Images



ARG21972 anti-Collagen IV antibody [2F11] IHC-Fr image

Immunohistochemistry: Frozen section of Human skin tissue stained with ARG21972 anti-Collagen IV antibody [2F11] followed by Goat anti-Mouse IgG1 antibody (Alexa Fluor® 488) and DAPI.



ARG21972 anti-Collagen IV antibody [2F11] IHC-Fr image

Immunohistochemistry: Frozen section of Human skin tissue stained with anti-Type I Collagen antibody and ARG21972 anti-Collagen IV antibody [2F11] followed by ARG21895 Goat anti-Mouse IgG2b antibody (Biotin) (pre-adsorbed), Goat anti-Mouse IgG1 antibody (Alexa Fluor® 488), Streptavidin (Cy3) and DAPI.