

# **Product datasheet**

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# ARG23994 anti-Collagen IV antibody

Package: 50 μl Store at: -20°C

#### **Summary**

Product Description Rabbit Polyclonal antibody recognizes Collagen IV

Tested Reactivity Hu

Tested Application ELISA, ICC/IF, IHC-P, WB

Host Rabbit

**Clonality** Polyclonal

Isotype IgG

Target Name Collagen IV

Species Human

Immunogen Type IV collagen extracted from Human placenta.

Conjugation Un-conjugated

Alternate Names BSVD; RATOR; Collagen alpha-1(IV) chain

## **Application Instructions**

Application table	Application	Dilution
	ELISA	1:2000
	ICC/IF	1:40
	IHC-P	1:500
	WB	Assay-dependent
	* The dilutions indicate recomm should be determined by the sci	ended starting dilutions and the optimal dilutions or concentrations entist.

#### **Properties**

Form	Liquid
Purification	Purified.
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

	COL4A1
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Gene Full Name collagen, type IV, alpha 1

Background This gene encodes a type IV collagen alpha protein. Type IV collagen 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

Function

Type IV collagen 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]

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.

RefSeq, Dec 2014]

Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains.

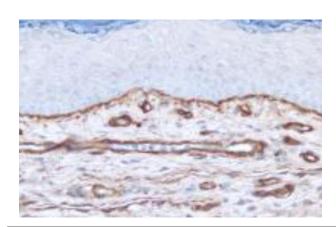
Type IV collagens contain numerous cysteine residues which are involved in inter- and intramolecular disulfide bonding. 12 of these, located in the NC1 domain, are conserved in all known type IV collagens.

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. [UniProt]

Cellular Localization Secreted, extracellular space, extracellular matrix, basement membrane. [UniProt]

#### **Images**



#### ARG23994 anti-Collagen IV antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human skin tissue stained with ARG23994 anti-Collagen IV antibody.