



Rabbit Anti-CO4A2 antibody

SL7501R

Product Name:	CO4A2
Chinese Name:	Collagen protein4a2亚基抗体
Alias:	Collagen alpha 2(IV) chain; Canstatin; COL4A 2; COL4A2; Collagen, type IV, alpha 2; CO4A2_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	25/149kDa
Cellular localization:	The cell membraneExtracellular matrixSecretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Collagen alpha-2(IV) chain:1651-1712/1712
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	CO4A2 is one of the six subunits of type IV collagen, the major structural component of basement membranes. CO4A2 fors a 'chicken-wire' meshwork together with laminins, proteoglycans and entactin/nidogen and is an inhibitor of angiogenesis and tumor growth.

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.

Canstatin, a cleavage product corresponding to the collagen alpha 2(IV) NC1 domain, possesses both anti-angiogenic and anti-tumor cell activity. It inhibits proliferation and migration of endothelial cells, reduces mitochondrial membrane potential, and induces apoptosis. Specifically induces Fas-dependent apoptosis and activates procaspase-8 and -9 activity. Ligand for alphavbeta3 and alphavbeta5 integrins.

Subunit:

There are six type IV collagen isoforms, alpha 1(IV)-alpha 6(IV), each of which can form a triple helix structure with 2 other chains to generate type IV collagen network.

Subcellular Location:

Secreted, extracellular space, extracellular matrix, basement membrane.

Post-translational modifications:

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. [PTM] The trimeric structure of the NC1 domains is stabilized by covalent bonds between Lys and Met residues (By similarity). Proteolytic processing produces the C-terminal NC1 peptide, canstatin.

DISEASE:

Defects in COL4A2 are the cause of porencephaly type 2 (POREN2) [MIM:614483]. POREN2 is a neurologic disorder characterized by a fluid-filled cysts or cavities within the cerebral hemispheres. Affected individuals typically have hemiplegia, seizures, and intellectual disability. Porencephaly type 2, or schizencephalic porencephaly, is usually symmetric and represents a primary defect in the development of the cerebral ventricles. [DISEASE] Defects in COL4A2 are a cause of susceptibility to intracerebral hemorrhage (ICH) [MIM:614519]. ICH is a pathological condition characterized by bleeding into one or both cerebral hemispheres including the basal ganglia and the cerebral cortex. It is often associated with hypertension and craniocerebral trauma. Intracerebral bleeding is a common cause of stroke.

Similarity:

Belongs to the type IV collagen family.

Contains 1 collagen IV NC1 (C-terminal non-collagenous) domain.

SWISS:

P08572

Gene ID:

1284

Database links:

[Entrez Gene: 1284](#)Human

[Entrez Gene: 12827](#)Mouse

[Entrez Gene: 306628](#)Rat

[Omim: 120090](#)Human

[SwissProt: P08572](#)Human

[SwissProt: P08122](#)Mouse

[Unigene: 508716](#)Human

[Unigene: 181021](#)Mouse

[Unigene: 378026](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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