Cleaved Tumstatin (Pro1426) Rabbit pAb

CatalogNo: YC0078 **Orthogonal Validated**

Key Features

Host Species
- Rabbit

Reactivity
- Human,Monkey

Applications
- WB,ELISA

MW
- 27kD (Observed)

Isotype
- IgG

Recommended Dilution Ratios

WB 1:500-1:2000
ELISA 1:40000
Not yet tested in other applications.

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human Collagen IV alpha3. AA range:1407-1456
Specificity	Cleaved-Tumstatin (P1426) Polyclonal Antibody detects endogenous levels of fragment of activated Tumstatin protein resulting from cleavage adjacent to P1426.

Target Information

Gene name COL4A3

Protein Name Collagen alpha-3(IV) chain

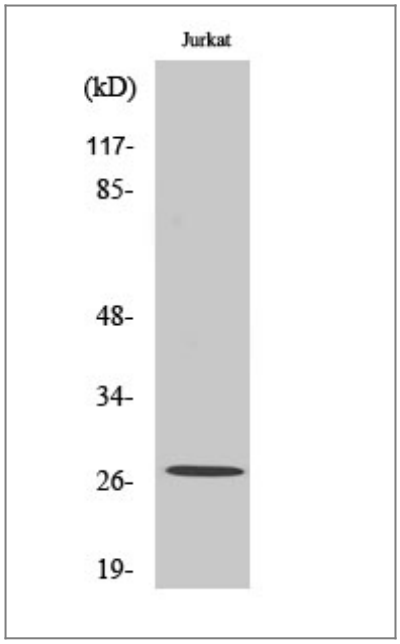
Organism	Gene ID	UniProt ID
Human	1285;	Q01955;
Mouse		Q9QZS0;

Cellular Localization Secreted, extracellular space, extracellular matrix, basement membrane. Colocalizes with COL4A4 and COL4A5 in GBM, tubular basement membrane (TBM) and synaptic basal lamina (BL). .

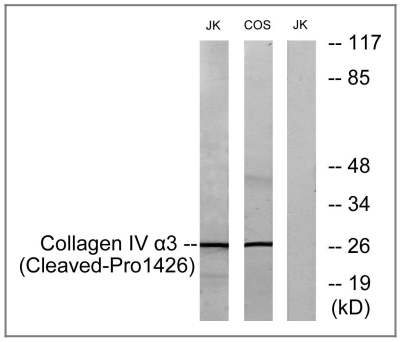
Tissue specificity Alpha 3 and alpha 4 type IV collagens are colocalized and present in kidney, eye, basement membranes of lens capsule, cochlea, lung, skeletal muscle, aorta, synaptic fibers, fetal kidney and fetal lung. PubMed:8083201 reports similar levels of expression of alpha 3 and alpha 4 type IV collagens in kidney, but PubMed:7523402 reports that in kidney levels of alpha 3 type IV collagen are significantly lower than those of alpha 4 type IV collagen. According to PubMed:8083201, alpha 3 type IV collagen is not detected in heart, brain, placenta, liver, pancreas, extrasynaptic muscle fibers, endoneurial and perineurial nerves, fetal brain, fetal heart and fetal liver. According to PubMed:7523402, alpha 3 type IV collagen is strongly expressed in pancreas, neuroretina and calvaria and not expressed in adrenal, ileum and skin. Isoform 1 and isoform 3 are strongly expressed in kidney, lung, suprarenal capsule, muscle and spleen, in each of these tissues isoform 1 is more abundant than isoform 3. Isoform 1 and isoform 3 are expressed at low levels in artery, fat, pericardium and peripherical nerve, but not in placenta, mesangium, skin, pleura and cultured umbilical endothelial cells.

Function	Alternative products:The majority of isoforms differ in the C-terminal part of the NC1 domain,Disease:Autoantibodies against the NC1 domain of alpha 3(IV) are found in Goodpasture syndrome, an autoimmune disease of lung and kidney.,Disease:Defects in COL4A3 are a cause of Alport syndrome autosomal recessive (APSAR) [MIM:203780]. APSAR is characterized by progressive glomerulonephritis, glomerular basement membrane defects, renal failure, sensorineural deafness and specific eye abnormalities (lenticonous and macular flecks). The disorder shows considerable heterogeneity in that families differ in the age of end-stage renal disease and the occurrence of deafness.,Disease:Defects in COL4A3 are a cause of benign familial hematuria (BFH) [MIM:141200]; also known as thin basement membrane nephropathy. BFH is characterized by persistent hematuria, an electron microscopically detectable thin glomerular basement membrane (GBM) and an autosomal dominant mode of inheritance. Renal function remains normal. In children, differentiation between BFH and AS can be difficult, because both disorders are manifested by persistent hematuria and thin GBM at that age.,Domain:Alpha chains of type IV collagen have a non-collagenous domain (NC1) at their C-terminus, frequent interruptions of the G-X-Y repeats in the long central triple-helical domain (which may cause flexibility in the triple helix), and a short N-terminal triple-helical 7S domain.,Function:Tumstatin, a cleavage fragment corresponding to the collagen alpha 3(IV) NC1 domain, possesses both anti-angiogenic and anti-tumor cell activity; these two anti-tumor properties may be regulated via RGD-independent ITGB3-mediated mechanisms.,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.,miscellaneous:The epitopes recognized by the Goodpasture autoantibodies are sequestered within the NC1 hexamer of the type IV collagen network.,PTM:Isoform 2 contains an additional N-linked glycosylation site.,PTM:Phosphorylated by the Goodpasture antigen-binding protein/COL4A3BP.,PTM:Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains.,PTM: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.,similarity:Belongs to the type IV collagen family.,similarity:Contains 1 collagen IV NC1 (C-terminal non-collagenous) domain.,subcellular location:Colocalizes with COL4A4 and COL4A5 in GBM, tubular basement membrane (TBM) and synaptic basal lamina (BL).,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. The alpha 3(IV) chain forms a triple helical protomer with alpha 4(IV) and alpha 5(IV); this triple helical structure dimerizes through NC1-NC1 domain interactions such that the alpha 3(IV), alpha 4(IV) and alpha 5(IV) chains of one protomer connect with the alpha 5(IV), alpha 4(IV) and alpha 3(IV) chains of the opposite promoter, respectively. Interacts with COL4A3BP AND ITGB3. Associates with LAMB2 at the neuromuscular junction and in GBM.,tissue specificity:Alpha 3 and alpha 4 type IV collagens are colocalized and present only in basement membranes of kidney, eye, cochlea, lung and brain.,

Validation Data



Western Blot analysis of various cells using Cleaved-Tumstatin (P1426) Polyclonal Antibody



Western blot analysis of lysates from Jurkat and COS7 cells, treated with etoposide 25uM 24h, using Collagen IV alpha3 (Cleaved-Pro1426) Antibody. The lane on the right is blocked with the synthesized peptide.

Contact information

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Please scan the QR code to access additional product information: **Cleaved Tumstatin (Pro1426) Rabbit pAb**