



COL4A4 Polyclonal Antibody

Catalog No	YP-Ab-16986
Isotype	IgG
Reactivity	Human;Rat;Mouse;
Applications	IHC;IF;ELISA
Gene Name	COL4A4
Protein Name	Collagen alpha-4(IV) chain
Immunogen	The antiserum was produced against synthesized peptide derived from human Collagen IV alpha4. AA range:541-590
Specificity	COL4A4 Polyclonal Antibody detects endogenous levels of COL4A4 protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	COL4A4; Collagen alpha-4(IV) chain
Observed Band	
Cell Pathway	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	Expressed in Bruch's membrane, outer plexiform layer, inner nuclear layer, inner plexiform layer, ganglion cell layer, inner limiting membrane and around the blood vessels of the retina (at protein level) (PubMed:29777959). 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. Highest levels of expression of alpha 4 type IV collagen are detected in kidney, calvaria, neuroretina and cardiac muscle. Lower
Function	disease:Defects in COL4A4 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. Defects in COL4A4 are a cause of benign familial hematuria (BFH) [MIM:141200]; also known as thin basement membrane disease. 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

Background

This gene encodes one of the six subunits of type IV collagen, the major structural component of basement membranes. This particular collagen IV subunit, however, is only found in a subset of basement membranes. Like the other members of the type IV collagen gene family, this gene is organized in a head-to-head conformation with another type IV collagen gene so that each gene pair shares a common promoter. Mutations in this gene are associated with type II autosomal recessive Alport syndrome (hereditary glomerulonephropathy) and with familial benign hematuria (thin basement membrane disease). Two transcripts, differing only in their transcription start sites, have been identified for this gene and, as is common for collagen genes, multiple polyadenylation sites are found in the 3' UTR. [provided by RefSeq, Jul 2008],

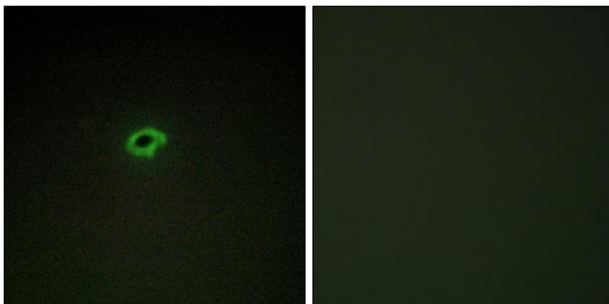
matters needing attention

Avoid repeated freezing and thawing!

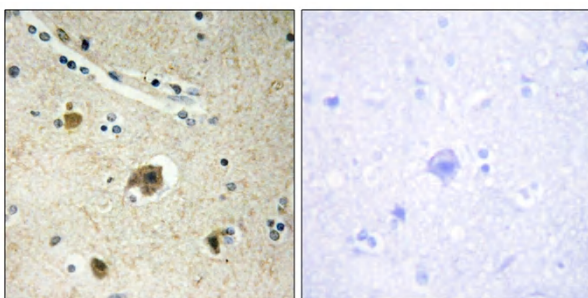
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

Products Images



Immunofluorescence analysis of COS7 cells, using Collagen IV alpha4 Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using Collagen IV alpha4 Antibody. The picture on the right is blocked with the synthesized peptide.