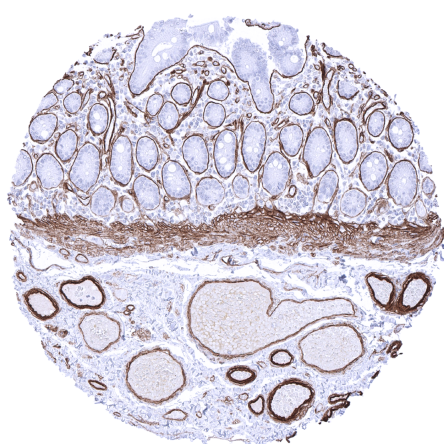


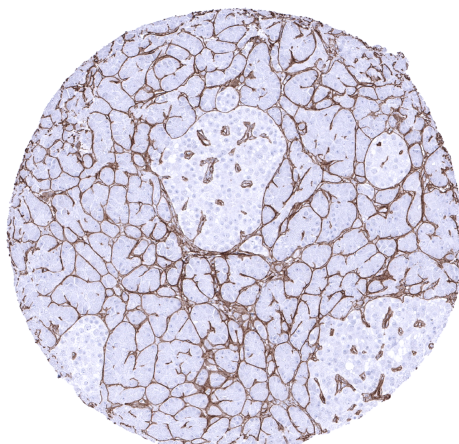
Anti-Collagen IV Antibody MSVA-704R / Recombinant Rabbit monoclonal

Human SwissProt	P02462; P08572; P29400; P53420
Human Gene Symbol	COL4A
Synonyms	Arrestin; BSVD; COL4A1; COL4A1 NC1 domain; COL4A2; COL4A3; COL4A4; COL4A5; collagen alpha-1(IV) chain; Collagen IV Alpha 1 Polypeptide; Collagen IV Alpha 2 Polypeptide; Collagen Type IV Alpha 2; Collagen Type IV Alpha 3; Collagen Type IV Alpha 4; Collagen Type IV Alpha 5; RATOR
Specificity	Collagen IV
Immunogen	Recombinant fragment of human COL4A protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cytoplasmic

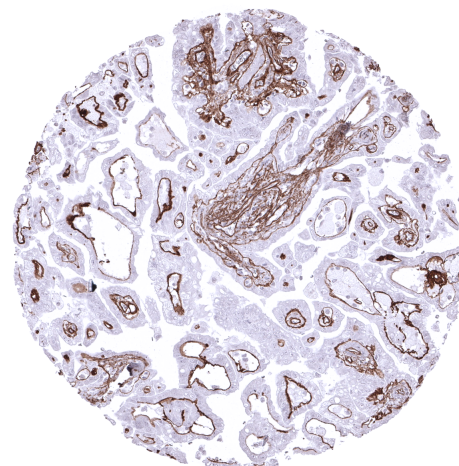
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Colon: An at least moderate collagen IV immunostaining of basement membranes and a strong staining of vessels and the tunica muscularis mucosa should be seen.
Negative Control	Colon: Collagen IV immunostaining must be absent in epithelial cells.



In the intestine, collagen IV immunostaining involves basement membranes, vessels of all sizes and smooth muscle cells of the lamina muscularis mucosae.



Collagen IV positive membranes surround pancreatic acini. Small blood vessels do also stain positive.



Papillary renal cell carcinoma showing a delicate collagen IV positive membrane between tumor cells and the stroma and an intense staining of vessels.

Biology

Collagen type IV is a 160-190 kDa protein composed of multiple subunits. The protein is a major component of the basement membrane, which is the specialized sheet-like extracellular matrix that occurs between connective tissues and epithelial cells, endothelial cells, or Schwann cells and surrounds various cell types such as heart muscle cells, skeletal muscle cells, smooth muscle cells, and adipocytes. Collagen type IV functions as a barrier between tissue compartments and has many binding partners. Because subdomains are released when the protein is degraded, Collagen type IV also has a signaling role. Mutations of Collagen type IV cause Alport's syndrome, a chronic kidney disease. Goodpasture syndrome, an autoimmune disease affecting the lungs and the kidneys, is caused by antibodies to the $\alpha 3$ chain of Collagen type IV. In normal tissues, collagen type IV immunostaining is seen in all basement membranes separating epithelial cells from neighboring tissues. Collagen IV also surrounds individual smooth muscle, heart muscle and skeletal muscle cells as well as decidua cells. Accordingly all muscular tissues and vessels show significant collagen IV immunostaining. In tumors, a positive collagen IV immunostaining is usually seen in tumors derived from muscle or fat cells. In other tumor entities a variable quantity of collagen IV immunostaining is usually seen in the tumor stroma (especially in vessels) and structures invaded by a tumor (muscle, fat). Collagen IV positive membranes are regularly seen around tumor cell nests, irrespective of whether or not these are invasive.

Potential Research Applications

Collagen IV immunohistochemistry can be used for visualization of basement membranes.

-Collagen IV is a useful component of multicolor immunofluorescence if different tissue compartments (separated by basement membranes) require a separate automated analysis.

Protocol Suggestions

Dilution: 1:150 ; pH7,8 is optimal.

Freshly cut sections should be used (less than 10 days between cutting and staining).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

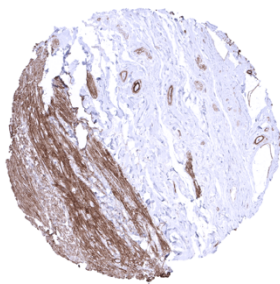
Not for resale without express authorization.

Warranty

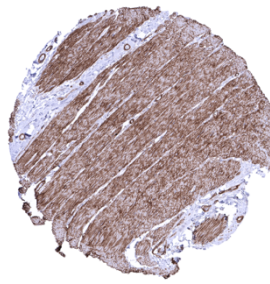
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



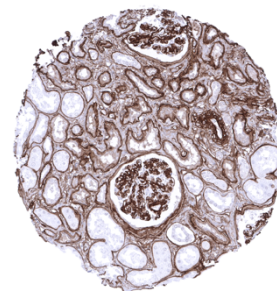
Aorta, media



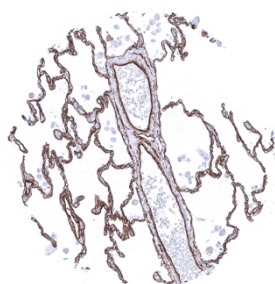
Appendix, muscular wall



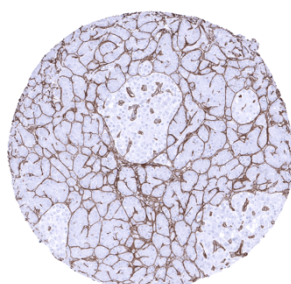
Colon descendens, muscular wall



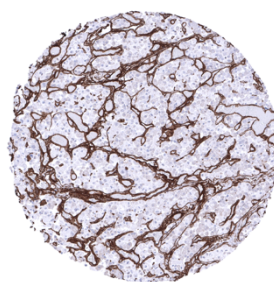
Kidney, cortex - Collagen IV
 immunostaining is more intense in areas
 of kidney damage where basement
 membranes are thickened



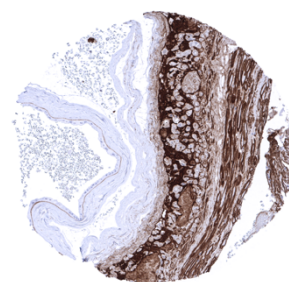
Lung - Collagen IV immunostaining
 of basement membranes and
 vessels



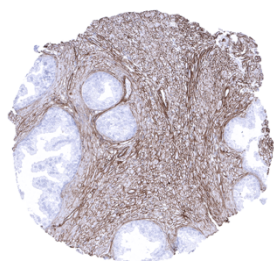
Pancreas - Collagen IV
 immunostaining of small vessels
 and delicate fibres surrounding
 acini in the pancreas



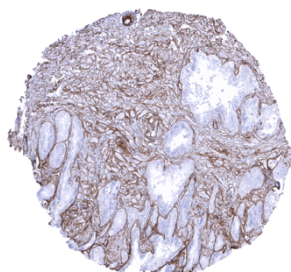
Pituitary gland, anterior lobe



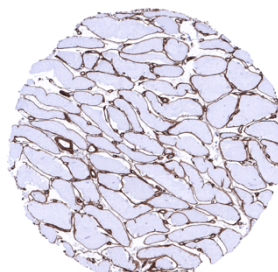
Placenta (amnion and chorion)



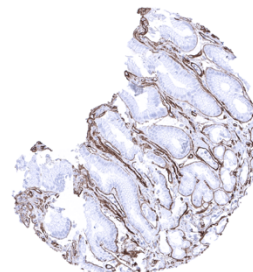
Prostate - In the prostate, smooth
 muscle cells are surrounded by
 collagen IV. Basement membranes
 and vessels are also stained



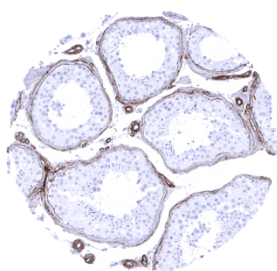
Seminal vesicle - In the seminal
 vesicle, smooth muscle cells are
 surrounded by collagen IV.
 Basement membranes and vessels
 are also staining



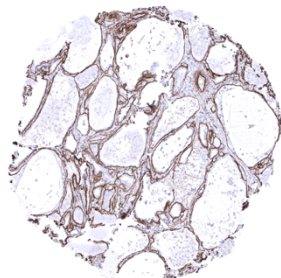
Skeletal muscle - Each skeletal
 muscle cell is surrounded by
 collagen IV



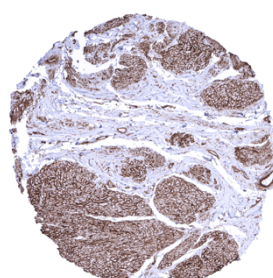
Stomach, antrum - Collagen IV
 immunostaining involves basement
 membranes and vessels



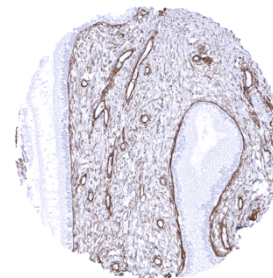
Testis - In the testis, peritubular
 smooth muscle cells are surrounded
 by collagen IV. Basement
 membranes and vessels are also
 staining



Thyroid gland



Urinary bladder, muscular wall -
 Each smooth muscle cell is
 surrounded by collagen IV



Uterus, endocervix