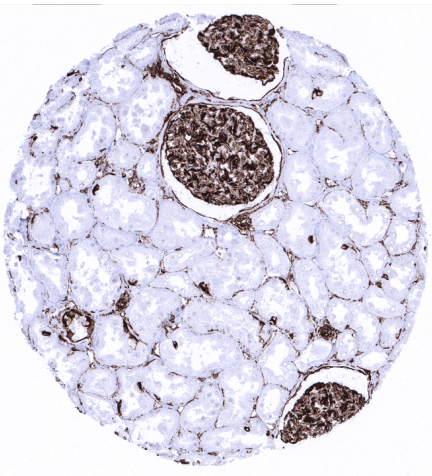


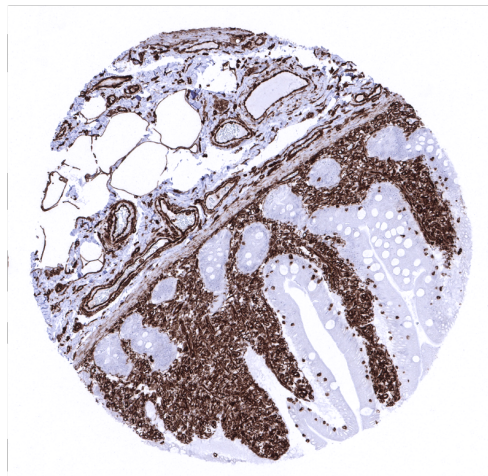
Anti- Vimentin Antibody MSVA-458R / Recombinant Rabbit monoclonal

Human SwissProt	P08670
Human Gene Symbol	VIM
Synonyms	VIM
Specificity	Vimentin
Immunogen	Recombinant fragment of human Vimentin protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cytoplasmic

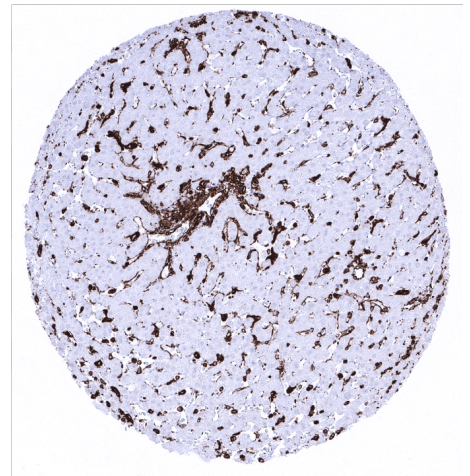
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	In liver, all Kupffer cells must show a strong staining while sinusoidal endothelial should display an at least weak intensity. In colon, endothelial cells of large vessels and stromal cells must show strong staining while dispersed intraepithelial T-cells must show an at least moderate staining.
Negative Control	In the liver, Hepatocytes cells should be negative. In the colon, all epithelial cells should be negative.



In the kidney, a strong vimentin staining is seen in all cell types of glomeruli (including Bowman capsule) and in vessels. Epithelial cells are vimentin negative.



In the duodenum, endothelial cells of large vessels and stromal cells show strong vimentin immunostaining while dispersed intraepithelial T-cells show an at least moderate staining.



In liver, all Kupffer cells must show a strong vimentin immunostaining while sinusoidal endothelial should display an at least weak intensity.

Biology

Vimentin, is a 57 kDa protein coded by the VIM gene at 10p13. It is the first intermediate filament protein to be expressed during cell differentiation. All primitive cell types express vimentin but in most non-mesenchymal cells it is later replaced by other intermediate filament proteins. Vimentin is the major cytoskeletal component of mesenchymal cells and is thus used as a marker of mesenchymal cell origin and of epithelial-to-mesenchymal transition (EMT) during cancer progression. Vimentin expression induces a transformation of cells to an elongated, flat, mesenchymal shape. In normal tissues, vimentin immunostaining can be found in various mesenchymal cells including fat cells, fibroblasts, endothelial cells, macrophages, melanocytes, Langerhans cells, Schwann cells, glial cells, lymphocytes, mesothelium, ovarian granulosa cells, Sertoli and Leydig cells of the testis. Vimentin is usually absent in skeletal and heart muscle, but regularly seen in vascular smooth muscle. In non-vascular smooth muscle vimentin expression is normally low or absent, but can be upregulated in case of regeneration. Vimentin is also regularly found in several specialized epithelia, such as the Bowman capsule of the kidney, fallopian tube, endometrium, endocervix (weak), thyroid gland, adrenal gland (cortex and medulla), and pancreas (basolateral portion of acinar cells) as well as in myoepithelial cells of the breast, salivary and sweat glands. Vimentin is present in many different neoplasms but is particularly expressed in those originated from mesenchymal cells such as in fibrosarcoma, angiosarcoma, leiomyosarcoma and rhabdomyosarcoma, and sarcoma NOS, as well as lymphomas, malignant melanoma and schwannoma. Mesoderm derived carcinomas like renal cell carcinoma, adrenal cortical carcinoma and adenocarcinomas from endometrium

and ovary usually express vimentin. Also thyroid carcinomas are vimentin positive. Poorly differentiated or sarcomatoid carcinomas from other sites of origin may also express some vimentin.

Potential Research Applications

Vimentin is a canonical marker for epithelial-mesenchymal transformation. As such it can be used in multicolor imaging for delineating and studying cells undergoing EMT.

Protocol Suggestions

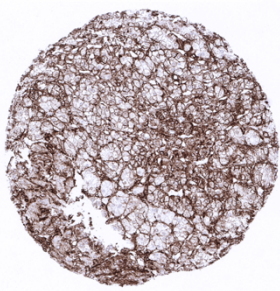
Dilution: 1:150 ; pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

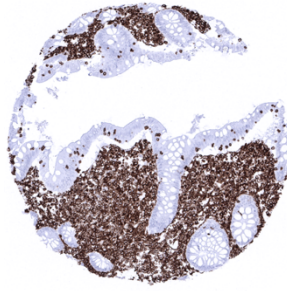
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

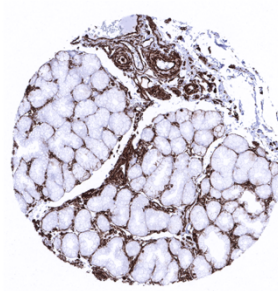
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



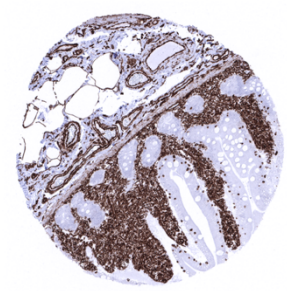
Adrenal gland - In the adrenal gland a variable vimentin immunostaining can be seen in cortical and medullary cells



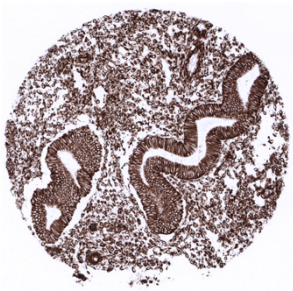
Appendix, mucosa



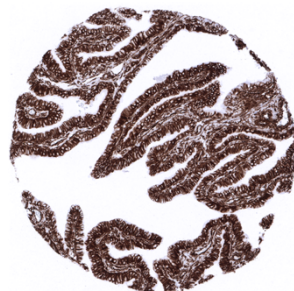
Duodenum, Brunner gland



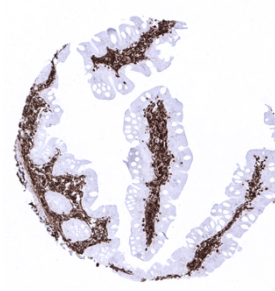
Duodenum, mucosa - In the duodenum, endothelial cells of large vessels and stromal cells must show strong staining while dispersed intraepithelial T-cells must show an at least moderate staining



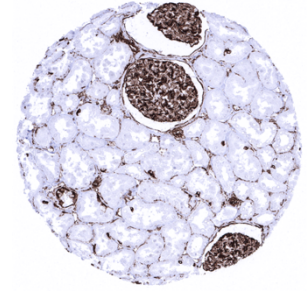
Endometrium, proliferation - Glandular cells and stromal cells of the endometrium show strong vimentin immunostaining



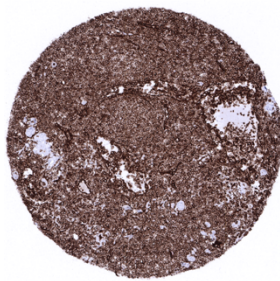
Fallopian tube, mucosa - Strong vimentin immunostaining of glandular cells and stromal cells of the fallopian tube



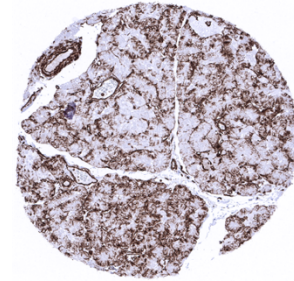
Ileum, mucosa



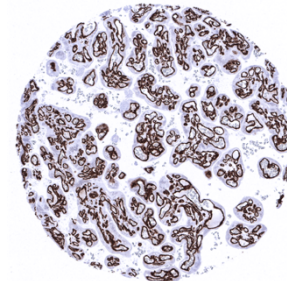
Kidney, cortex - In the normal kidney, a strong vimentin staining is seen in all cell types of glomeruli and Bowman capsule and in vessels. Epithelial cells are vimentin negative



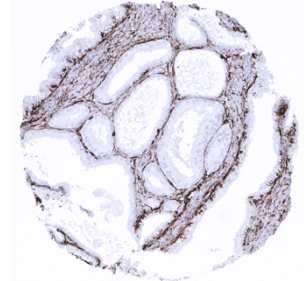
Lymph node - Strong vimentin expression in all lymphocytic cell types



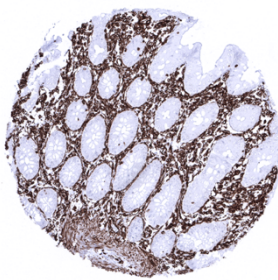
Pancreas - In the pancreas, the vast majority of epithelial cells of exocrine acini should display a weak to strong basolateral membranous and cytoplasmic staining



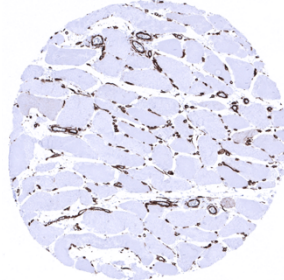
Placenta, mature - In the placenta, a strong vimentin staining is seen in vessels while trophoblastic cells are strictly negative



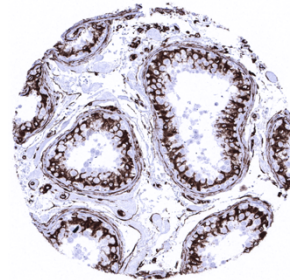
Prostate - Some vimentin immunostaining may be found in prostate acinar cells



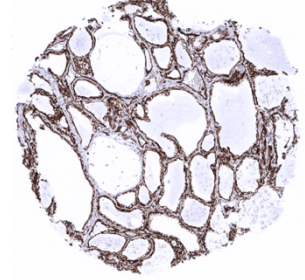
Rectum, mucosa



Striated muscle - In striated muscle, vimentin immunostaining is limited to accompanying blood vessels



Testis - In the testis, Sertoli and Leydig cells are strongly positive for vimentin (Leydig cells are not seen on this image)



Thyroid gland - Follicular epithelial cells and stromal cells of the fallopian tube show strong vimentin immunostaining