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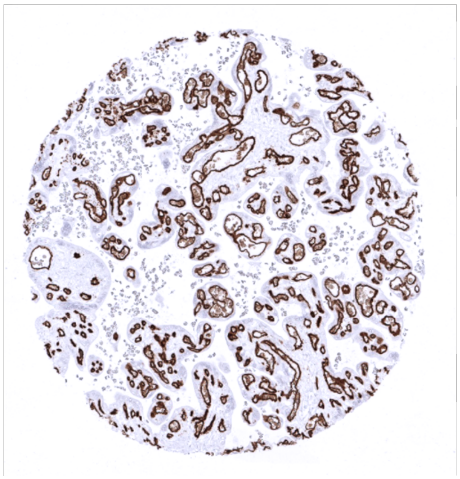
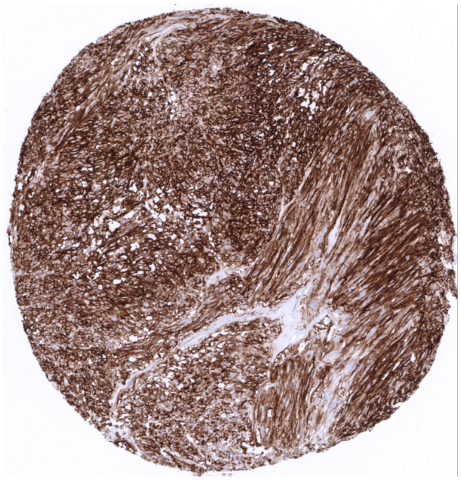
Anti-CD34 Antibody
MSVA-034R / Recombinant Rabbit monoclonal

Human SwissProt	P28906
Human Gene Symbol	CD34
Synonyms	Hematopoietic Progenitor Cell Antigen, HPCA1, Mucosialin
Specificity	CD34
Immunogen	Recombinant human CD34 protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell Surface and Cytoplasmic

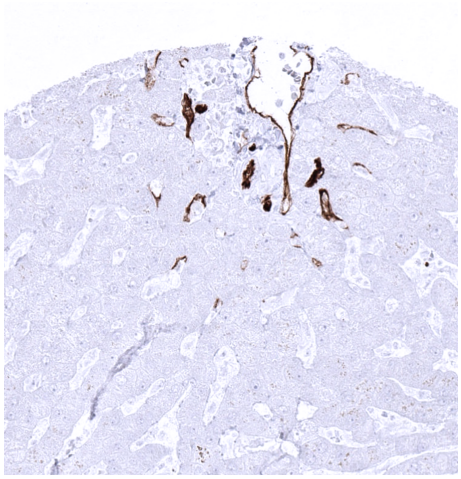
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	In the liver, a moderate to strong predominately membranous staining of endothelial cells in the portal vessels and the periportal sinusoidal endothelial cells. Endothelial cells located more remotely from the portal field show a rapidly CD34 decreasing expression level.
Negative Control	In the liver, hepatocytes should always stain CD34 negative. Sinusoidal cells remote from the portal fields must also be CD34 negative.



Strong CD34 immunostaining of blood vesels in a mature placenta



Gastrointestinal stromal tumor with strong CD34 expression



In the liver, CD34 is only seen in portal vessels and periportal sinusoidal endothelial cells. CD34 staining intensity decreases rapidly in endothelial cells located more remotely from the portal field. Hepatocytes are CD34 negative

Biology

CD34 is a commonly used marker of hematopoietic progenitor cells and endothelial cells. It was first described as a cell surface protein on hematopoietic stem cells. The CD34 function is not entirely clear but it acts as a cell-cell adhesion factor, facilitates cell migration, and has several other functions. In normal tissues, CD34 is found in most endothelial cells of blood vessels but is absent from sinuses in the placenta, and spleen, and may be less intensely expressed or absent in endothelia of large veins and arteries. CD34 is expressed at lower level in endothelial cells of lymphatics. In the liver, CD34 is seen in portal blood vessels and periportal sinusoids but expression is lost in sinus that are more remote from the portal fields. CD34 is also expressed in stroma cells of endometrium and cervix uteri, fibroblast-like dendritic cells, as well as in some fibroblasts, fibrocytes, interstitial cells of Cajal, mast cells, megakaryocytes, and - at variable levels - in smooth muscle cells. According to this broad spectrum of cell types that can express CD34, a positive CD34 immunostaining is regularly seen in the stroma of various organs such as thyroid gland, fallopian tube, testis, epididymis, seminal vesicle, bronchial mucosa, prostate, Brunner glands, and salivary glands. In tumors, CD34 is often found in myeloid blasts in myelodysplastic syndrome and acute myeloid leukemia as well as in lymphoblasts in most cases of B-acute lymphoblastic leukemia. CD34 is detectable in most vascular tumors, including hemangiosarcoma and Kaposi sarcoma but only in about 30% of lymphangiomas. Strong CD34 positivity is seen in most cases of dermatofibrosarcoma protuberans, most gastrointestinal stromal tumors, and solitary fibrous tumors. However, CD34 immunostaining can – at variable, sometimes also strong intensity – occur in many other soft tissue tumors such as in liposarcoma, sarcoma NOS, MPNST, leiomyosarcoma, myxofibrosarcoma, and other tumor types.

Potential Research Applications

--The prevalence of CD34 expression in different cancer subtypes should be comprehensively investigated.

-The role of CD34 positive peritumoral stroma is not clarified. The extent of CD34 positivity of tumor stroma varies markedly between tumor types and individual tumors.

-Identification of cells with stem cell properties.

-The function of CD34 is still largely unknown

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.
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.

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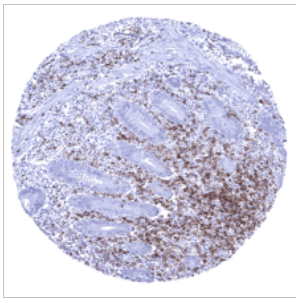
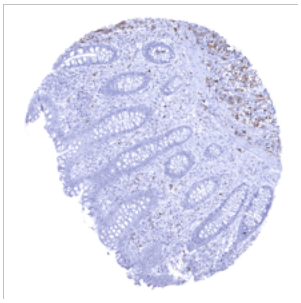
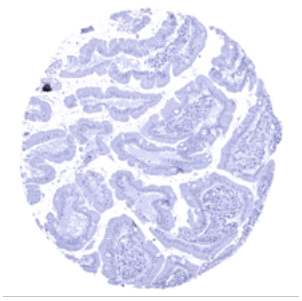


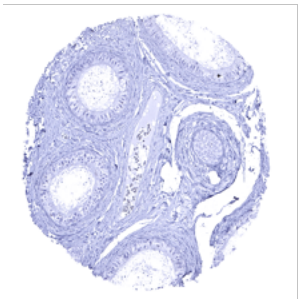
Appendix, mucosa - Abundant CD22 positive B-lymphocytes in the area of a lymph follicle of the appendix mucosa



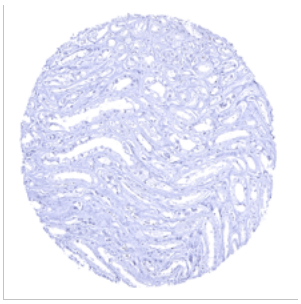
Appendix, mucosa



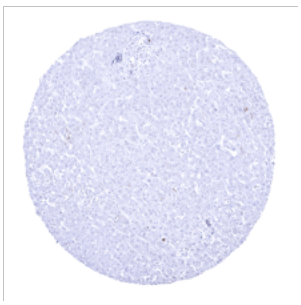
Duodenum, mucosa



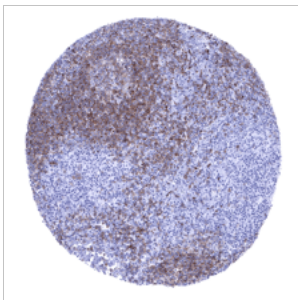
Epididymis



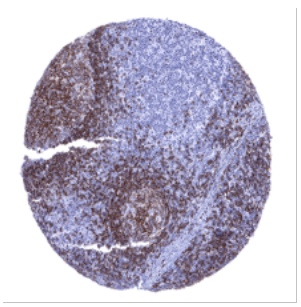
Kidney, medulla



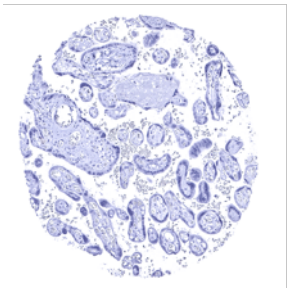
Liver



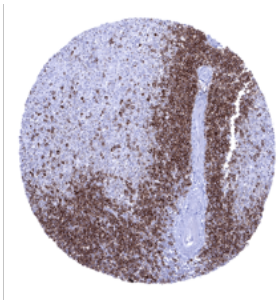
Lymph node - Germinal centre and mantle zone contain numerous CD22 positive B-lymphocytes, while these cells are only rare in the interfollicular zone



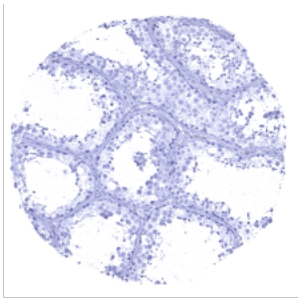
Lymph node - CD22 positive B-lymphocytes predominate in germinal centres and mantle zones but are only sparse in the interfollicular zone



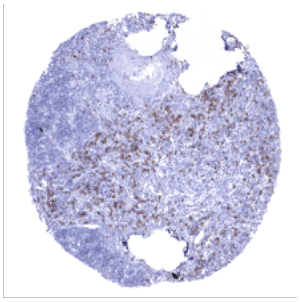
Placenta, mature



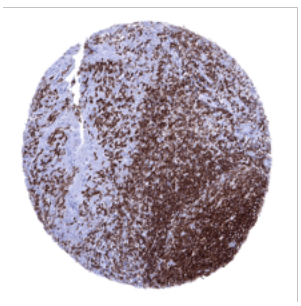
Spleen - CD22 positive B-lymphocytes predominate in the white pulp but are only sparse in the red pulp



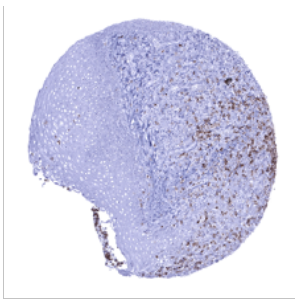
Testis



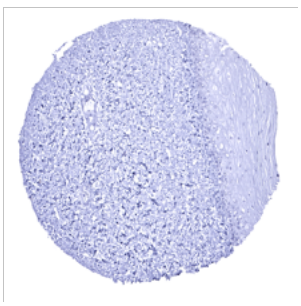
Thymus - CD22 positive B-lymphocytes are rather sparse in the thymus



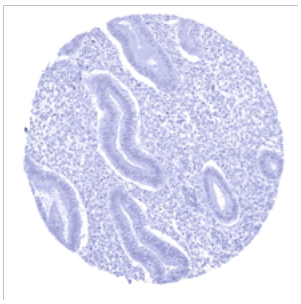
Tonsil - CD22 positive B-lymphocytes are abundant in this sample of the tonsil



Tonsil, surface epithelium



Uterus, ectocervix



Uterus, endometrium (proliferation)