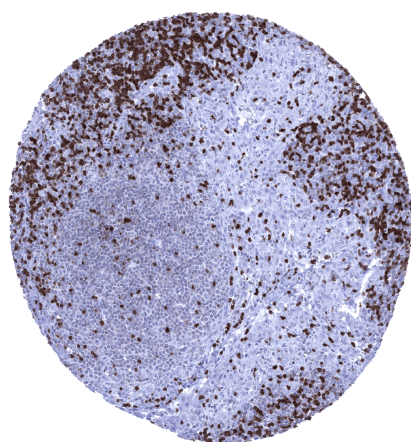


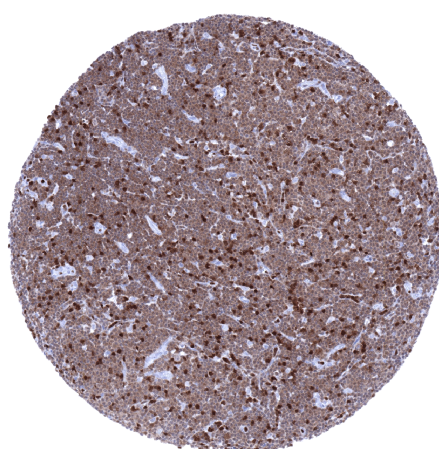
## Anti- ZAP-70 Antibody MSVA-870R / Recombinant Rabbit monoclonal

Human SwissProt	P43403
Human Gene Symbol	ZAP70
Synonyms	Selective T cell defect; SRK; STD; Syk-related tyrosine kinase; Tyrosine-protein kinase ZAP-70; TZK; Zeta chain associated protein kinase 70kDa
Specificity	ZAP70
Immunogen	Recombinant human ZAP70 fragment
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell Surface and Cytoplasmic

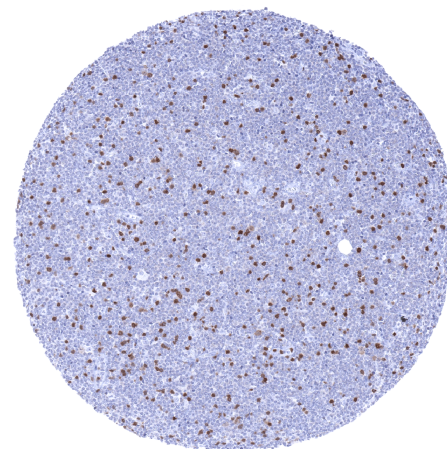
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Tonsil: A large fraction of the lymphocytes in the interfollicular areas and few lymphocytes in the germinal centres should show a strong ZAP70 immunostaining.
Negative Control	Tonsil: ZAP70 immunostaining should be absent in epithelial tissues and the majority of cells in germinal centres.



In lymph nodes, ZAP70 positive lymphocytes predominate in the interfollicular zone but are much less numerous in germinal centres



B-CLL with strong ZAP70 staining of tumor cells and even stronger staining in interspersed normal T-lymphocytes



ZAP70 negative B-CLL containing a significant number of ZAP70 positive T-lymphocytes

### Biology

ZAP70 (Zeta-chain-associated protein kinase 70) is a 70 kDa protein-tyrosine kinase coded by the ZAP70 gene at chromosome 2q11.2. ZAP70 is mainly expressed in T cells and NK cells and plays a role in T cell receptor (TCR) activation. Because T cell receptors do not have any own enzymatic activity, they rely on signaling molecules to convey signals from the cell membrane. ZAP70 is a critical cytoplasmic tyrosine kinase that initiates a signal pathway downstream of an activated T cell receptor. Aberrant expression of ZAP70 occurs in a subset of Chronic Lymphocytic Leukemia (CLL) and can also occur in other B-cell malignancies. In B-CLL, ZAP70 expression reflects unfavorable patient prognosis. The staining of ZAP70 positive cells in normal tissues reflects the physiologic distribution of T cells, natural killer cells, and cortical thymocytes. Accordingly, ZAP70 positive cells are most prominently seen in the thymus and lymphatic organs. ZAP70 positive (T-) lymphocytes also regularly occur - at variable numbers - in most other tissue types. Among tumors, ZAP70 immunostaining occurs in most T-cell lymphomas and a fraction of B-cell neoplasms. In addition, ZAP70 positive T-lymphocytes constitute a part of the tumor microenvironment of all kinds of neoplasms.

### Potential Diagnostic Applications

-Strong prognostic marker in B-CLL (ZAP70 positivity heralds unfavorable disease course).

### Protocol Suggestions

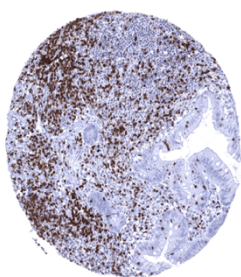
**Dilution: 1:100 ; pH 7,8 is optimal.** Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

### Limitations

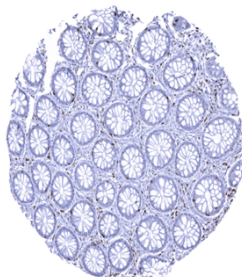
This antibody is available for **research use only** and is not approved for use in diagnostics.

### Warranty

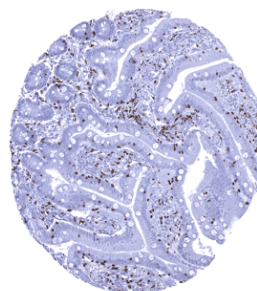
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



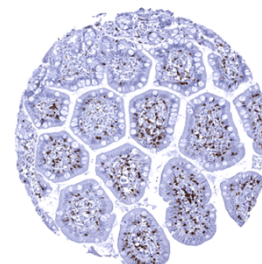
Appendix, mucosa - In the appendix, numerous ZAP70 positive lymphocytes are seen. They occur within the epithelium, in the lamina propria, and - at lower numbers - within germinal centres



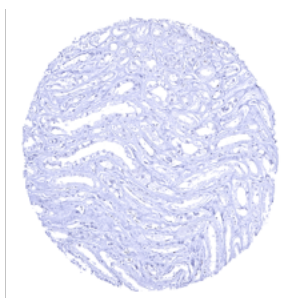
Colon descendens, mucosa



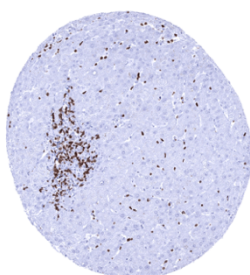
Duodenum, mucosa - A considerable number of ZAP positive lymphocytes is seen in the lamina propria of the duodenum



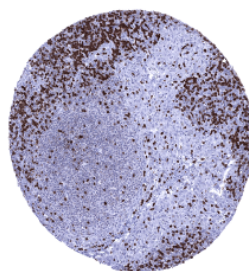
Ileum, mucosa - A considerable number of ZAP positive lymphocytes occurs in the lamina propria of the ileum



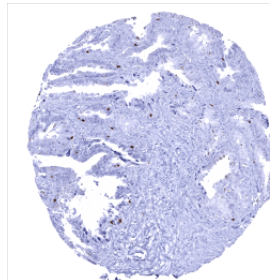
Kidney, medulla



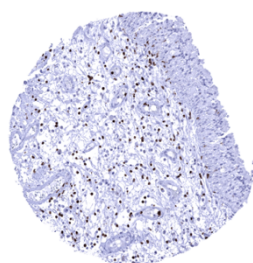
Liver - ZAP70 positive lymphocytes are seen in a portal field and within sinusoids



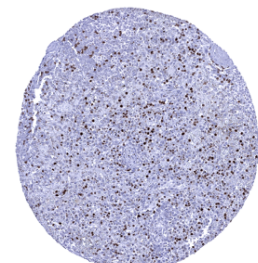
Lymph node - ZAP70 positive lymphocytes predominate in the interfollicular zone but are much less numerous in germinal centres



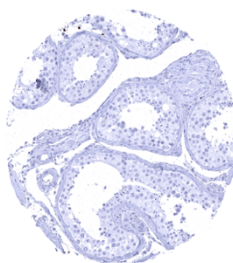
Seminal vesicle - Scattered ZAP70 positive lymphocytes are mainly seen in the epithelium



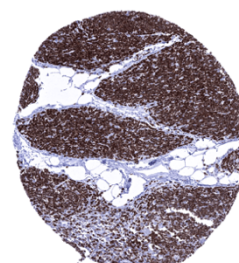
Sinus paranasales - Numerous ZAP70 positive lymphocytes are seen in the subepithelial stroma of the respiratory epithelium



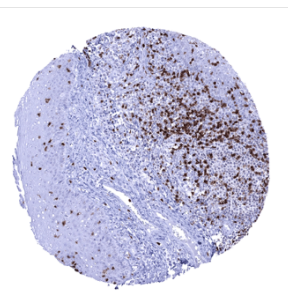
Spleen



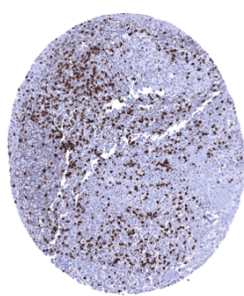
Testis



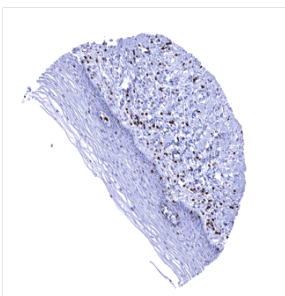
Thymus - The vast majority of lymphocytes of the thymus are ZAP70 positive, especially in the cortex



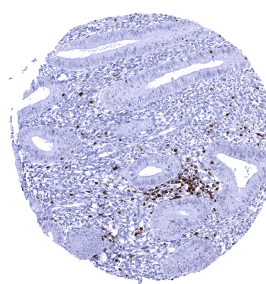
Tonsil, surface epithelium - Numerous ZAP70 positive T-lymphocytes are seen in the tonsil. A limited number of ZAP70 positive cells also infiltrate the surface epithelium



Tonsil



Uterus, ectocervix - Scattered ZAP70 positive lymphocytes are seen in the surface epithelium and the subepithelial stroma



Uterus, endometrium (proliferation)