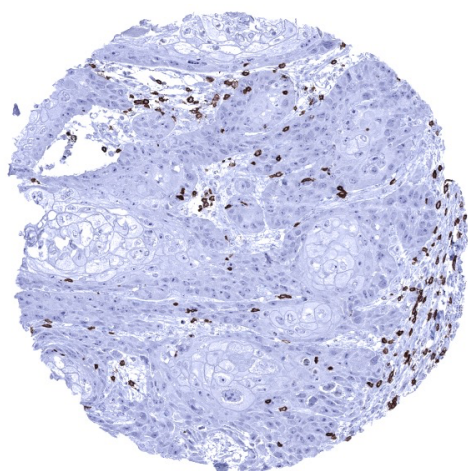


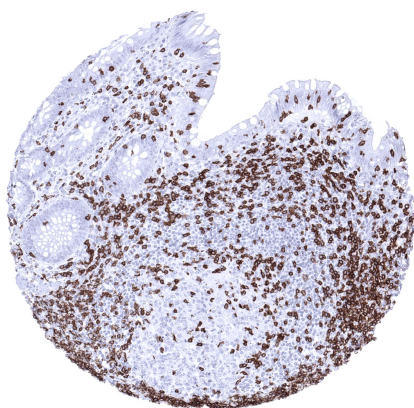
Anti-CD3e Antibody MSVA-003R / Recombinant Rabbit Monoclonal

Human SwissProt	P07766
Human Gene Symbol	CD3E
Synonyms	CD3 epsilon; CD3 TCR complex; T cell antigen receptor complex epsilon subunit of T3; T-cell surface antigen T3/Leu-4 epsilon chain; T-cell surface glycoprotein CD3 epsilon chain; T3E; TCRE; TIT3 complex
Specificity	CD3E
Immunogen	Recombinant fragment of human CD3E protein
Isotype	Rabbit / IgG
Species Reactivity	Human

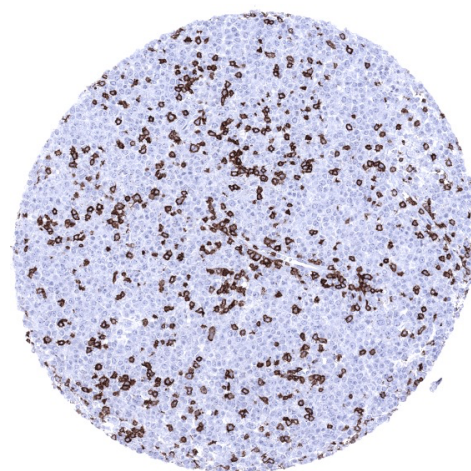
Localization	Cell surface. Cytoplasm.
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. A ntibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Tonsil: A moderate to strong membranous staining should be seen in all T-cells in the interfollicular T-zones and in the germinal centres (few cells).
Negative Control	Tonsil: All epithelial structures and B-cells should not show any CD3 immunostaining.



Squamous cell carcinoma containing numerous CD3 positive T-lymphocytes



Appendix, mucosa - In the appendix, numerous CD3 positive T-lymphocytes occur in the epithelium, the lamina propria and in germinal centres



Diffuse large B-cell lymphoma infiltrated by numerous CD3 positive non-neoplastic lymphocytes

Biology

CD3 (cluster of differentiation 3; OKT3) is a protein complex containing four distinct chains that jointly act as a T cell co-receptor. It is involved in activating both cytotoxic T cells (CD8+ naive T cells) and T helper cells (CD4+ naive T cells). The CD3 protein complex associates with the T-cell receptor (TCR) and the zeta-chain to form the TCR complex which generates an activation signal in T lymphocytes. CD3 is initially expressed in the cytoplasm of pro-thymocytes, the stem cells from which T-lymphocytes arise in the thymus. When the pro-thymocytes differentiate into common thymocytes, and subsequently into medullary thymocytes, the CD3 antigen begins to migrate to the cell membrane. CD3 is then found at the membranes of all mature T-cells. CD3 is a drug target for antibody-based treatment of acute graft rejection after transplantation. For cancer therapy, bispecific antibodies using anti-CD3 in combination with cancer surface proteins such as B7-H3 are being explored. In normal tissues, CD3 immunostaining is only seen in T-cells. CD3 is retained in almost all T-cell lymphomas and leukemias. A variable number of CD3 positive tumor infiltrating lymphocytes regularly occur in virtually all other neoplasms. Of note, CD3 can rarely be also expressed in B-cell lymphoma.

Potential Research Applications

- The clinical significance of the number of intratumoral CD3 positive lymphocytes is under intensive research.
- CD3 is a key component of multicolor assays analyzing the role of lymphocyte subsets in cancers and other diseases.
- The prevalence of a positive CD3 immunostaining in hematological and non-hematological neoplasms should be further evaluated.

Protocol Suggestions

Dilution: 1:150. pH 9 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

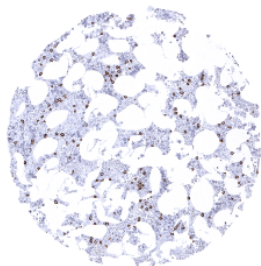
This antibody is available for **research use only** and is not approved for use in diagnostics. Not for resale without express authorization.

Warranty

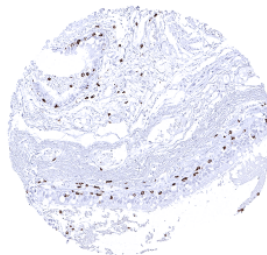
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



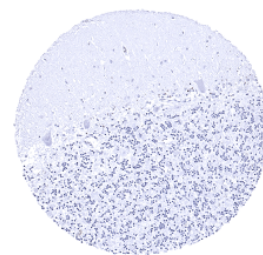
Appendix, mucosa - In the appendix, numerous CD3 positive T-lymphocytes are seen. They occur within the epithelium, in the lamina propria, and - at lower numbers - in germinal centres



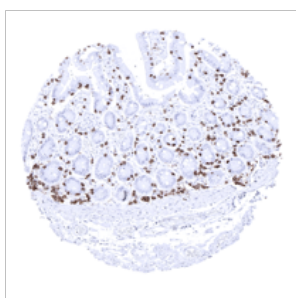
Bone marrow



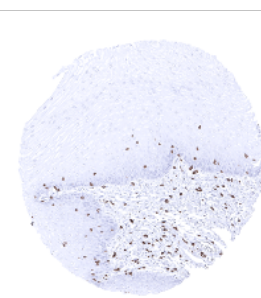
Bronchus, mucosa



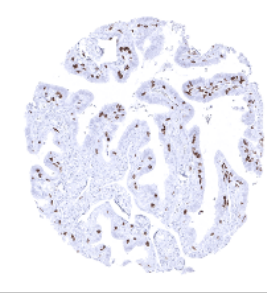
Cerebellum (molecular layer, Purkinje cell layer, granule cell layer)



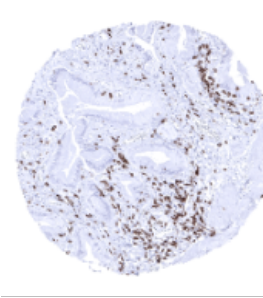
Duodenum, mucosa - A considerable number of CD3 positive T-lymphocytes is regularly seen in the lamina propria of the duodenum



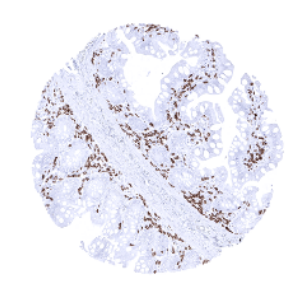
Esophagus, squamous epithelium



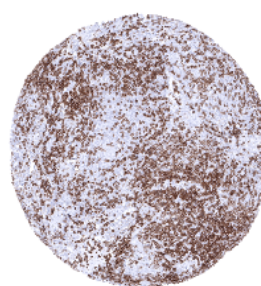
Fallopian tube, mucosa



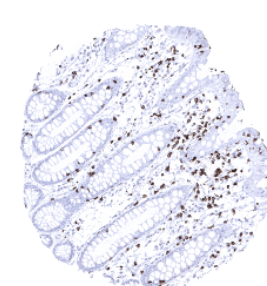
Gallbladder, epithelium



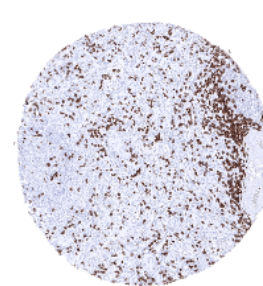
Ileum, mucosa



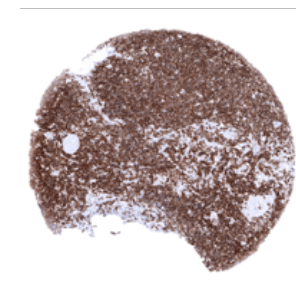
Lymph node



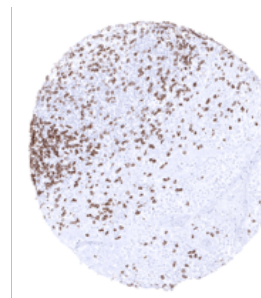
Rectum, mucosa



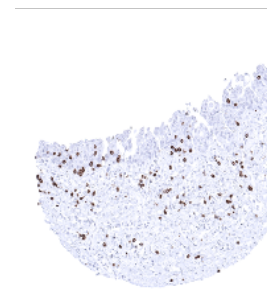
Spleen



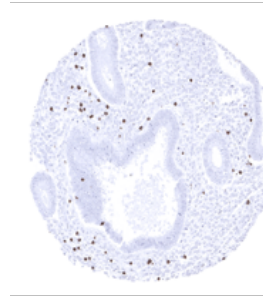
Thymus - The highest density of CD3 positive T-lymphocytes is seen in the thymus



Tonsil



Urinary bladder, urothelium



Uterus, endometrium (proliferation)