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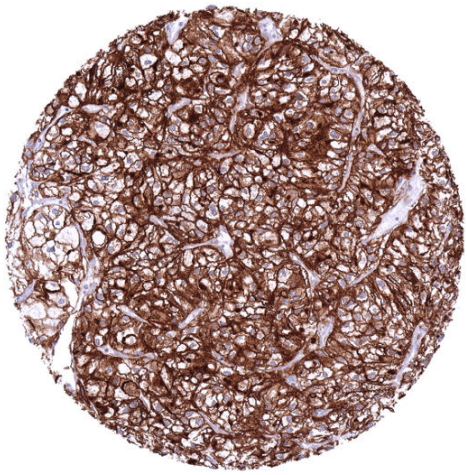
Revision 4.0

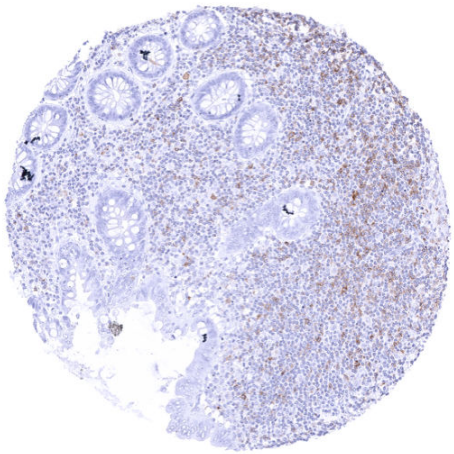
Anti- CD70 Antibody
MSVA-070R / Recombinant Rabbit monoclonal

Human SwissProt	P32970
Human Gene Symbol	CD70
Synonyms	CD27 ligand (CD27L); CD27LG; Ki24; Surface antigen CD70; Tumor necrosis factor ligand superfamily member 7 (TNFSF7)
Specificity	CD70
Immunogen	Recombinant human CD70 fragment
Isotype	Kappa / IgG
Species Reactivity	Human

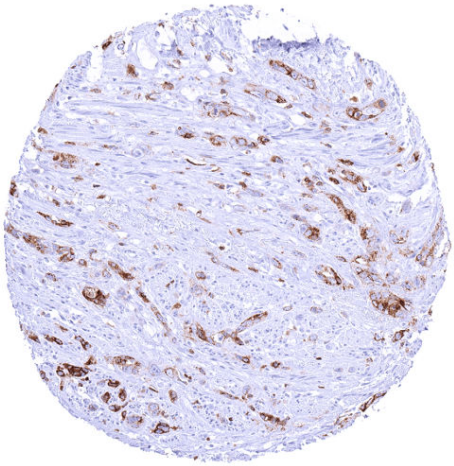
Localization	Membranous
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Appendix: A distinct membranous CD70 staining should be seen in a subset of inflammatory cells (especially interfollicular).
Negative Control	Appendix: CD70 staining should be absent in epithelial cells.



Clear cell renal cell carcinoma with strong membranous CD70 staining of all tumor cells.



Appendix with distinct CD70 staining of a fraction of lymphocytes while epithelial cells are CD70 negative.



Gastric adenocarcinoma with strong membranous CD70 staining of most tumor cells.

Biology

CD70 (Cluster of Differentiation 70) is a type II transmembrane protein which is coded by the TNFSF7 gene located on chromosome 19p13.3. The CD70 protein is a member of the tumor necrosis factor receptor family. Under physiologic conditions, CD70 is transiently expressed on antigen-activated B and T cells, NK cells and mature dendritic cells where it acts as a costimulatory molecule and interacts with CD27. Upon contact with CD70, the extracellular domain of CD27 is cleaved off and disposed as a soluble fragment (called sCD27) into body fluids. Among normal tissues, CD70 expression is limited to subsets of immune cells and not seen in any epithelial cell type. The CD70/CD27 axis plays an important role in the regulation of the immune response. Its role may be particularly important in cancer. CD70 positivity occurs in several types of lymphomas but neo-expression of CD70 has also been described in various cancer types. It is most commonly seen in renal cell carcinoma but it can also occur in other cancer types. CD70/CD27 signaling is believed to support cancer growth by constraining inflammatory T-cell expansion, guiding the proliferation of immune-suppressive T-regulatory cells, and empowering immune evasion. Accordingly, CD70 is considered a promising drug target for oncology.

Potential Research Applications

-Various drugs targeting CD70 are in clinical trials.
-The prevalence and clinical significance of CD70 expression on tumor cells in different cancer types is unclear.
-The role and clinical significance of CD70 expressing cancer associated fibroblasts is unclear.
-The exact mechanism of CD70/CD27 signaling needs to be further evaluated.

Protocol Suggestions

Dilution: 1:100 - 1:200; pH 7,8 is optimal. Freshly cut sections should be used (more 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.

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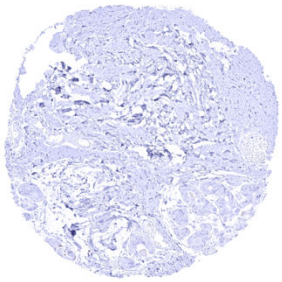
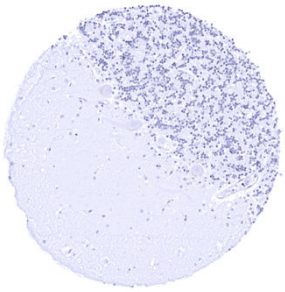
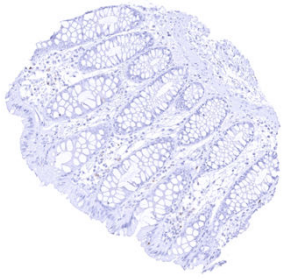


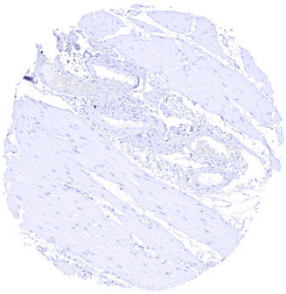
Breast



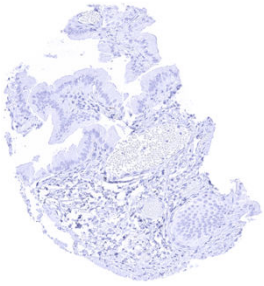
Cerebellum, cortex (molecular layer, Purkinje cell layer, granule cell layer)



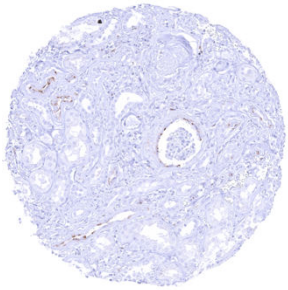
Colon descendens, mucosa



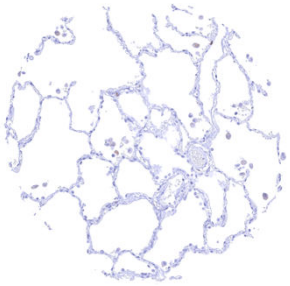
Esophagus, muscular wall



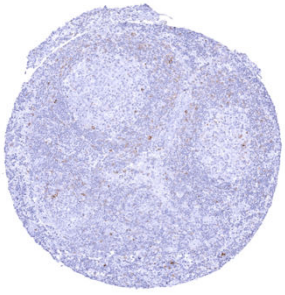
Gallbladder, epithelium



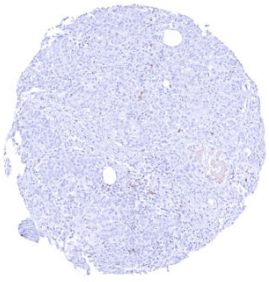
Kidney, cortex – Distinct CD70 membranous staining of the parietal layer of the Bowman capsule and of the luminal surface membrane of few tubuli which appear atrophic.



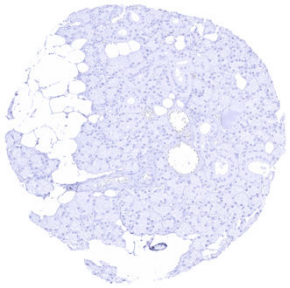
Lung



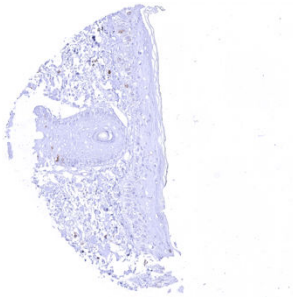
Lymph node – Membranous CD70 staining of variable intensity in subsets of cells (mostly lymphocytes). Most CD70 positive cells are interfollicular.



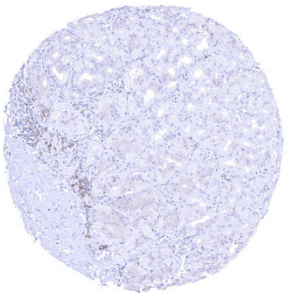
Pancreas



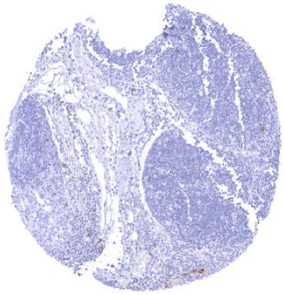
Parotid gland



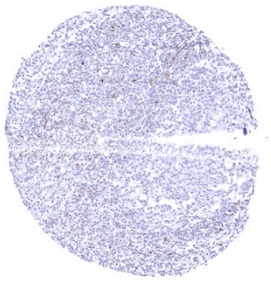
Skin – Membranous CD70 staining of few intraepithelial cells (probably lymphocytes).



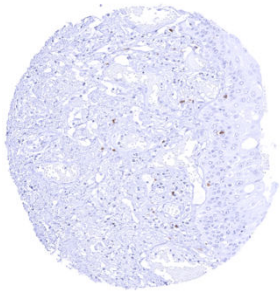
Stomach, corpus



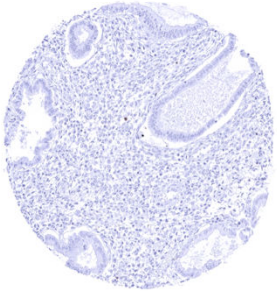
Thymus – Membranous CD70 staining of variable intensity in a small subset of cells.



Tonsil – Membranous CD70 staining of variable intensity in subsets of cells (mostly lymphocytes). Most CD70 positive cells are interfollicular.



Urinary bladder, urothelium – Membranous CD70 staining of intraepithelial lymphocytes.



Uterus, endometrium (secretion)