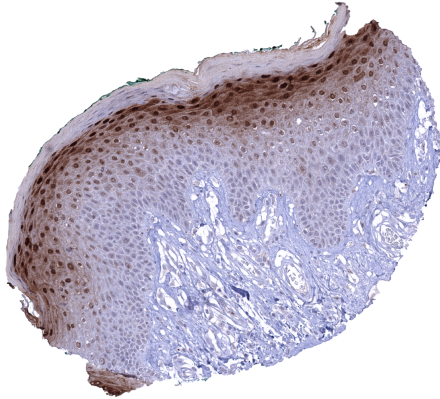


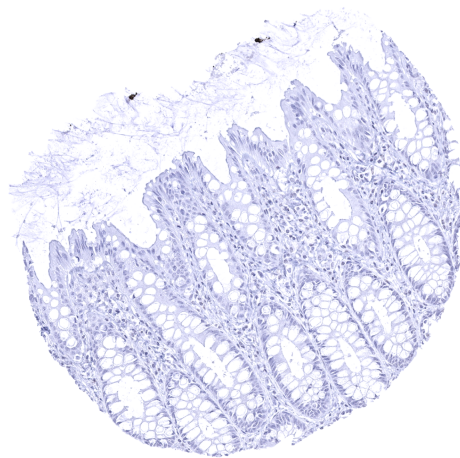
Anti-Cystatin A Antibody MSVA-461M / Mouse monoclonal

Human SwissProt	P01040
Human Gene Symbol	CSTA
Synonyms	STF1; STFA; AREI; csta; Stefin A
Specificity	Cystatin A
Immunogen	Recombinant fragment of human CSTA protein
Isotype	Mouse / IgG
Species Reactivity	Human
Localization	Cell Surface, Cytoplasmic and Nuclear.

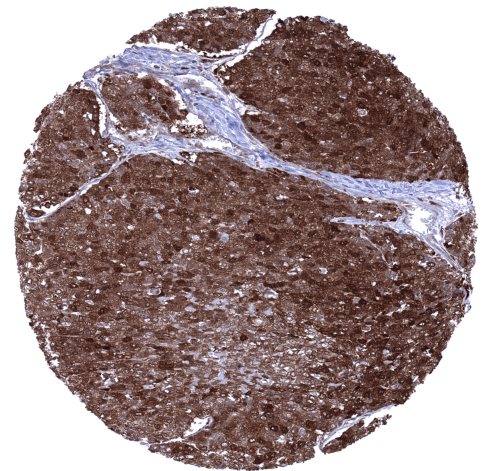
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Skin: A strong nuclear and cytoplasmic Cystatin A immunostaining should be seen in the granular layer.
Negative Control	Colon: No epithelial cell staining should be seen. Few inflammatory cells may show Cystatin A positivity.



Skin - In the skin, a nuclear and cytoplasmic Cystatin A immunostaining is predominantly seen in the granular cell layer. The staining intensity decreases towards the basal cell layer.



Rectum, mucosa - Cystatin A immunostaining is always absent in epithelial cells of the colon.



Squamous cell carcinoma of the esophagus showing a Cystatin A immunostaining of all tumor cells.

Biology

Cystatin-A is an 11 kDa protein that is coded by the CSTA gene located on chromosome 3q21.1. Cystatin A is a type 1 cystatin (stefin) that functions as a cysteine protease inhibitor. The protein is a precursor protein of the cornified cell envelope in keratinocytes and plays a role in the development and maintenance of squamous epithelia. Cystatin A has been suggested to play a role in barrier function and in targeting dust mite proteases. Cystatin A immunostaining predominantly occurs in squamous epithelia where a cytoplasmic and also nuclear staining pattern can be observed. The extent of staining is variable in these tissues and ranges from a staining of the entire epithelium to a staining of only the most superficial layers which especially occurs in the skin (granular layer). If the basal cell layer is stained, its staining intensity is always the least. Squamous cell staining also includes corpuscles of Hassal's and a fraction of cells in tonsil crypt epithelium. A less intense cystatin A immunostaining is seen in surface epithelial cells of the stomach (weak), basal cells of the prostate (moderate intensity), seminal vesicle, and the epididymis, myoepithelial cells and mucinous glands in sublingual glands, mucinous cells in bronchial glands (weak), and few cells of the respiratory epithelium. In the liver a faint cystatin A staining that exhibits a zonal distribution is seen in some samples. Cystatin A immunostaining also occurs in dendritic cells of germinal centres, macrophages, granulocytes, and a fraction of bone marrow cells. In tumors, Cystatin A immunostaining is usually seen in squamous cell carcinomas. At lower frequency – Cystatin A expression can also occur in various other tumor entities.

Potential Research Applications

- the biological and clinical significance of cystatin A expression in tumors is unknown.
- the role of cystatin A in the tumor stroma and its cells is unclear.
- The role of cystatin A in dendritic cells and in other inflammatory cells is unclear.

Protocol Suggestions

Dilution: 1:150 ; pH7,8 is optimal.

Freshly cut sections should be used (less than 10 days between cutting and staining).

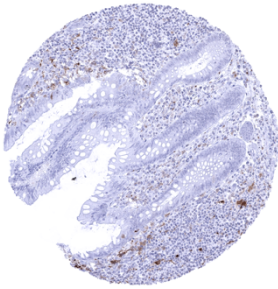
Limitations

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

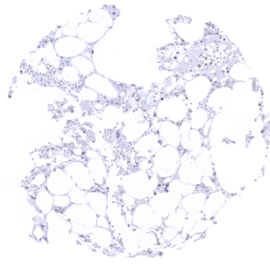
Not for resale without express authorization.

Warranty

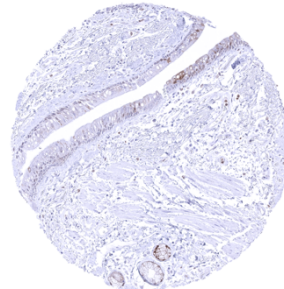
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



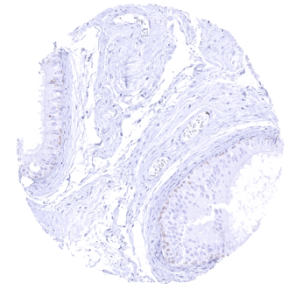
Appendix, mucosa



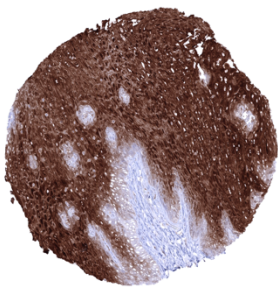
Bone marrow - Weak to moderate Cystatin A staining of a subset of cells



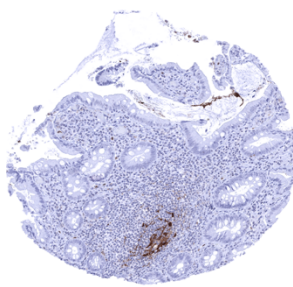
Bronchus, mucosa - Cystatin A staining is seen in mucinous cells of bronchial glands and in few cells of the respiratory epithelium



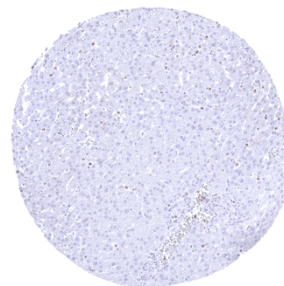
Epididymis - Weak to moderate intensity Cystatin A staining of basal



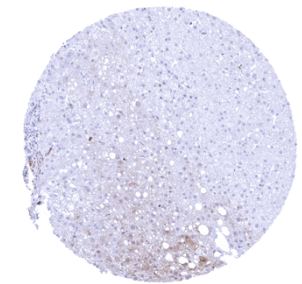
Esophagus, squamous epithelium - Strong Cystatin A immunostaining in suprabasal epithelial cell layers



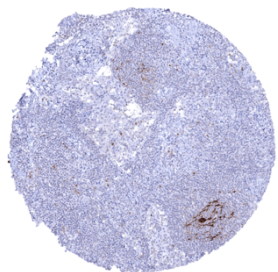
Ileum, mucosa - Strong Cystatin A immunostaining in dendritic cells of a germinal centre



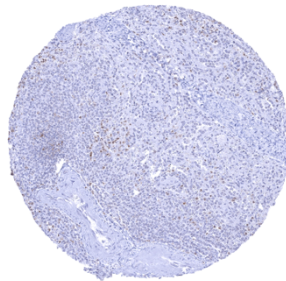
Liver - Cystatin A immunostaining is not seen in this liver sample



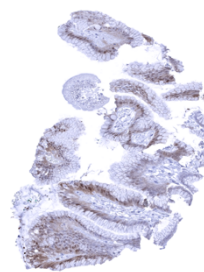
Liver - Faint Cystatin A immunostaining of hepatocytes showing a zonal distribution



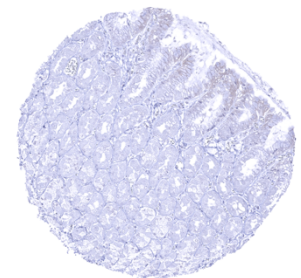
Lymph node - Strong Cystatin A immunostaining in dendritic cells of germinal centres



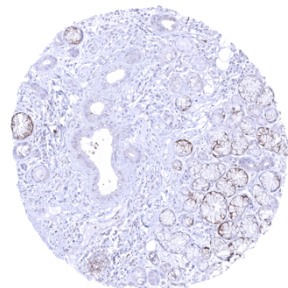
Spleen - Weak Cystatin A immunostaining in granulocytes



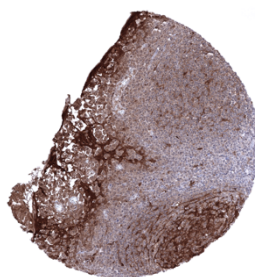
Stomach, antrum - Faint basal cytoplasmic Cystatin A immunostaining of surface epithelial cells



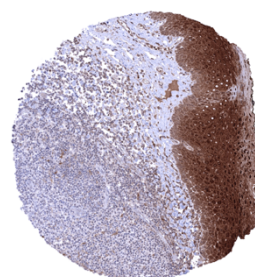
Stomach, corpus - Faint basal cytoplasmic Cystatin A immunostaining of surface epithelial cells



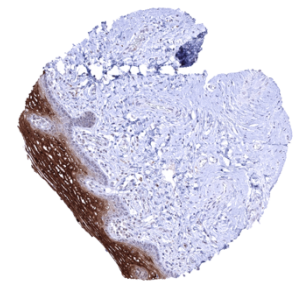
Sublingual gland - Weak to moderate Cystatin A staining in myoepithelial cells and some mucinous glands



Tonsil - Strong Cystatin A immunostaining of crypt epithelium and of dendritic cells. Adjacent lymphocytes also show weak staining. This may represent a tissue contamination in case of very high levels of target protein in this tissue sample.



Tonsil, surface epithelium - Intense Cystatin A immunostaining occurs across all epithelial cell layers. A weaker staining is also seen in subepithelial inflammatory cells and endothelia of subepithelial vessels. Endothelial cell staining is only seen in vessels adjacent to strongly positive epithelial tissues.



Uterus, ectocervix - Strong Cystatin A immunostaining in suprabasal epithelial cells