

CSTA Antibody / Cystatin A [clone MSVA-461M] (V5867)

Catalog No.	Formulation	Size
V5867-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5867-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant **MOUSE MONOCLONAL**

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Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2c, kappa
Clone Name	MSVA-461M
UniProt	P01040
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CSTA/Cystatin A antibody is available for research use only.



Immunohistochemistry tissue microarray analysis of Cystatin A expression. CSTA/Cystatin A antibody (clone MSVA-461M) was evaluated by immunohistochemistry on formalin-fixed, paraffin-embedded human tissue microarrays encompassing a broad range of normal and cancer tissues. Staining demonstrates cytoplasmic labeling patterns in epithelial compartments consistent with known Cystatin A expression profiles, with variable intensity across tissue types. Overall staining distribution and relative expression patterns are concordant with publicly available expression data reported by the Human Protein Atlas, supporting the biological relevance of the observed immunoreactivity.

Description

CSTA antibody targets Cystatin A, a cytoplasmic cysteine protease inhibitor encoded by the CSTA gene and a member of the type I cystatin family. Cystatin A is also commonly referred to as Stefin A and functions primarily as an endogenous inhibitor of lysosomal cysteine proteases such as cathepsins B, H, and L. Through this inhibitory activity, Cystatin A plays an important role in protecting cells from inappropriate protease-mediated protein degradation and maintaining epithelial barrier integrity.

Cystatin A is predominantly localized in the cytoplasm and is highly expressed in stratified squamous epithelia, including epidermis, oral mucosa, and esophagus. It is also detectable in epithelial-derived tumors and certain immune cell populations. Within epithelial cells, Cystatin A contributes to terminal differentiation processes and helps regulate protease activity during keratinization. CSTA antibody detection is therefore useful for studying epithelial differentiation, protease regulation, and tissue homeostasis.

Functionally, Cystatin A acts as a tight-binding inhibitor of papain-like cysteine proteases, limiting their proteolytic activity under physiological conditions. By modulating cathepsin activity, Cystatin A influences processes such as cell migration, apoptosis, and inflammatory responses. Its role in balancing protease activity makes CSTA antibody reagents valuable tools for investigating protease-inhibitor networks in normal tissues and disease models.

Altered expression of Cystatin A has been reported in a variety of pathological contexts, particularly in epithelial malignancies. Reduced or aberrant CSTA expression has been associated with tumor invasion and progression, while increased expression is often observed in well-differentiated squamous cell carcinomas. In addition, changes in Cystatin A levels have been linked to inflammatory skin disorders and barrier dysfunction. These associations underscore the relevance of CSTA antibody-based detection in cancer biology and epithelial pathology research.

Clone MSVA-461M is designed to recognize Cystatin A in research applications. CSTA antibody reagents are suitable for detecting protein expression and localization in epithelial tissues and tumor samples, supporting studies focused on protease regulation, epithelial differentiation, and disease-associated changes in cysteine protease inhibition.

Application Notes

1. Optimal dilution of the CSTA/Cystatin A antibody should be determined by the researcher.
2. This CSTA/Cystatin A antibody is recombinantly produced by expression in CHO cells.
3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121°C in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37°C for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human CSTA protein was used as the immunogen for the CSTA/Cystatin A antibody.

Storage

CSTA/Cystatin A antibody with sodium azide - store at 2 to 8°C; antibody without sodium azide - store at -20 to -80°C.