Cystatin A Antibody for IHC / CSTA Immunohistochemistry Antibody [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

Bulk quote request

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 Cystatin A Antibody for IHC / CSTA Immunohistochemistry Antibody is available for research use only.



Cystatin A Antibody for IHC Tissue Microarray (TMA) Multi-Tissue Expression. Immunohistochemistry analysis of Cystatin A (CSTA) expression in FFPE human tissue microarray (TMA) sections using Cystatin A Antibody for IHC clone MSVA-461M demonstrates strong cytoplasmic HRP-DAB brown staining in stratified squamous epithelia including skin, esophagus, and tonsil, while glandular, stromal, and non-epithelial tissues remain largely negative. In cancer tissue microarrays, diffuse and intense cytoplasmic staining is observed in squamous cell carcinoma tumor cells, with minimal staining in non-squamous malignancies, supporting its role as a squamous epithelial differentiation marker. The clear contrast between positive squamous tumor cells and negative surrounding tissues enhances interpretability in immunohistochemistry-based tumor analysis. Heat-induced epitope retrieval was performed prior to staining to ensure optimal antigen detection in FFPE sections.

Description

Cystatin A (CSTA), also known as Stefin A, is a member of the cystatin family of cysteine protease inhibitors and is

predominantly expressed in stratified squamous epithelial tissues. It plays an important role in regulating intracellular protease activity and maintaining epithelial barrier integrity during differentiation. In immunohistochemistry, Cystatin A is characteristically detected as cytoplasmic staining within squamous epithelial cells, making it a useful marker of epithelial differentiation. Cystatin A Antibody for IHC is widely used in formalin-fixed, paraffin-embedded tissues to visualize squamous cell populations and assess epithelial lineage in histological sections.

Cystatin A antibody, also referred to as CSTA antibody or Stefin A antibody in the literature, recognizes a cytoplasmic protein with strong and selective expression in squamous epithelia. This Cystatin A Antibody for IHC is specifically optimized for Tissue Microarray (TMA)-based immunohistochemistry, enabling high-throughput assessment of staining patterns across large panels of normal and cancer tissues under standardized conditions. In normal tissue TMAs, strong cytoplasmic HRP-DAB brown staining is consistently observed in stratified squamous epithelia such as skin, esophagus, and tonsil, while glandular tissues, stromal compartments, and non-epithelial cell populations remain largely negative, providing a clear contrast for interpretation.

In cancer tissue microarrays, Cystatin A expression is prominently detected in squamous cell carcinomas, where diffuse and intense cytoplasmic staining highlights tumor cells with squamous differentiation. This staining pattern is particularly evident in tumors of the head and neck, lung, and anogenital regions, where squamous lineage is a defining feature. In contrast, adenocarcinomas and other non-squamous malignancies typically show minimal or absent staining, supporting the use of Cystatin A Antibody for IHC in distinguishing squamous tumors from other epithelial cancer types. The ability to visualize these lineage-specific patterns across TMA cores enhances its utility in tumor classification and differential diagnosis studies.

Tissue Microarray (TMA) analysis enables direct side-by-side comparison of CSTA expression across hundreds of tissue cores, demonstrating reproducible staining with strong signal in squamous epithelia and corresponding tumor types, alongside minimal background in non-expressing tissues. The performance of clone MSVA-461M in TMA-based IHC highlights its ability to generate consistent, well-defined cytoplasmic staining across diverse tissue types, supporting its use in large-scale immunohistochemistry studies, biomarker validation, and tissue profiling applications.

This antibody targets Cystatin A in research applications requiring precise and interpretable immunohistochemical detection of epithelial differentiation markers in FFPE tissue sections, making it well suited for studies of squamous cell biology, tumor classification, and epithelial lineage identification.

This antibody is part of the Cystatin antibody collection, where additional CSTA antibodies can be explored.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the Cystatin A Antibody for IHC / CSTA Immunohistochemistry 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 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC 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 immuongen for the CSTA/Cystatin A antibody.

Storage

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

Alternate Names

CSTA antibody, Cystatin-A antibody, Stefin A antibody, Epidermal cystatin antibody, Cystatin A IHC antibody, CSTA immunohistochemistry antibody

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