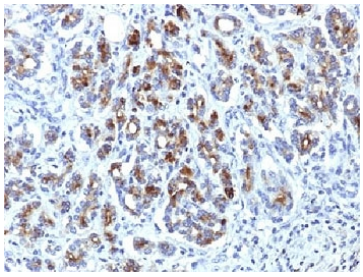
Alpha-1-Antichymotrypsin Antibody Histiocytoma Marker [clone AACT/1451] (V3227)

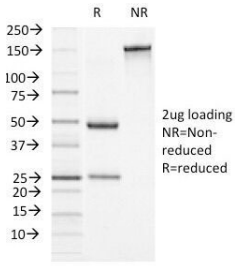
Catalog No.	Formulation	Size
V3227-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3227-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3227SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	AACT/1451
Purity	Protein G affinity
UniProt	P01011
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT
Limitations	This Alpha-1-Antichymotrypsin Antibody Histiocytoma Marker is available for research use only.



Alpha-1-Antichymotrypsin Antibody Pancreas IHC. Immunohistochemistry of Alpha-1-antichymotrypsin / SERPINA3 in FFPE human pancreas using a mouse monoclonal Alpha-1-antichymotrypsin antibody, clone AACT/1451. Cytoplasmic HRP-DAB brown staining is observed in glandular epithelial cells and scattered stromal or immune-associated cells, consistent with secreted protein localization and inflammatory component involvement, while nuclei are counterstained blue. Antigen retrieval was performed by steaming sections in pH 6 10 mM citrate buffer for 10â€“20 min prior to staining.



SDS-PAGE Analysis of Purified, BSA-Free Alpha-1-Antichymotrypsin Antibody (clone AACT/1451). Confirmation of Integrity and Purity of the Antibody.

Description

Alpha-1-antichymotrypsin (SERPINA3) is a secreted serine protease inhibitor of the serpin family that plays an important role in regulating inflammatory protease activity in human tissues. Alpha-1-Antichymotrypsin Antibody Histiocytoma Marker is used in immunohistochemistry to evaluate expression of this protein in tissue sections, particularly in tumor environments where histiocyte and macrophage populations are present. Alpha-1-antichymotrypsin antibody, also known as AACT antibody or SERPINA3 antibody in the literature, is associated with inflammatory and tumor-related protease regulation.

SERPINA3 is primarily synthesized by hepatocytes and secreted into circulation as a major acute phase reactant, with expression induced by cytokines such as IL-6 and IL-1 beta. In addition to its systemic role, SERPINA3 expression is frequently observed in tissue-resident immune cells, particularly macrophages and histiocyte-like populations within inflamed or neoplastic tissue. This distribution supports its use as a histiocytoma marker in immunohistochemical studies, where it can highlight components of the tumor microenvironment associated with immune infiltration and stromal response.

Functionally, Alpha-1-antichymotrypsin inhibits serine proteases including cathepsin G and chymotrypsin-like enzymes, thereby limiting proteolytic damage and maintaining extracellular matrix integrity. In tumor settings, this regulatory function contributes to modulation of the microenvironment, where protease activity influences tumor invasion, tissue remodeling, and immune cell recruitment. Alpha-1-antichymotrypsin antibody is therefore useful for studying the balance between proteolytic activity and inhibition within tumor-associated stroma and inflammatory infiltrates.

In immunohistochemistry, SERPINA3 is typically detected as cytoplasmic staining consistent with its secretory nature, with signal intensity varying depending on tissue type and pathological context. In tumors, staining may be observed in both neoplastic cells and surrounding histiocyte-rich areas, providing spatial insight into tumor-immune interactions. This pattern is particularly relevant when evaluating tumors with significant inflammatory components, where SERPINA3 expression can reflect the presence and activity of macrophage-lineage cells.

Analysis of Alpha-1-antichymotrypsin expression in FFPE tissues enables assessment of its role across a range of disease states, including cancer and chronic inflammation. The ability to visualize SERPINA3 distribution within tissue architecture makes Alpha-1-antichymotrypsin antibody a valuable tool for histopathology-oriented research. Its expression profile, combined with its functional role in protease inhibition, supports its application as a histiocytoma marker in studies focused on tumor microenvironment characterization.

The mouse monoclonal clone AACT/1451 antibody provides reliable detection of SERPINA3 in immunohistochemistry applications. When used in FFPE tissue with appropriate antigen retrieval conditions, it produces consistent cytoplasmic staining patterns that align with known expression profiles of Alpha-1-antichymotrypsin. This makes it suitable for investigating SERPINA3 expression in both normal and disease-associated tissues, particularly in contexts involving inflammation and tumor biology.

This SERPINA3 antibody is part of a broader set of Alpha-1-antichymotrypsin antibody reagents; for a validation-focused AACT antibody reference including liver expression and protein microarray specificity data, see Alpha-1-Antichymotrypsin antibody clone SERPINA3/4184.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the Alpha-1-Antichymotrypsin Antibody Histiocytoma Marker may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A human partial recombinant protein was used as the immunogen for this Alpha-1-Antichymotrypsin antibody.

Storage

Store the Alpha-1-Antichymotrypsin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

SERPINA3 antibody, AACT antibody, Serpin family A member 3 antibody, ACT antibody, Acute phase serpin antibody