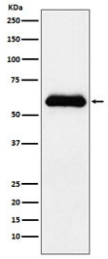
SERPINA3 Antibody / Alpha-1-antichymotrypsin Western Blot Antibody [clone ADED-19] (RQ4851)

Catalog No.	Formulation	Size
RQ4851	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	ADED-19
Purity	Affinity purified
UniProt	P01011
Applications	Western Blot : 1:500-1:1000
Limitations	This SERPINA3 Antibody / Alpha-1-antichymotrypsin Western Blot Antibody is available for research use only.



SERPINA3 Antibody Plasma WB. Western blot analysis of Alpha-1-antichymotrypsin / SERPINA3 in human plasma lysate using recombinant rabbit monoclonal SERPINA3 antibody, clone ADED-19. A prominent band is observed at approximately 50â€“65 kDa, consistent with the predicted molecular weight of SERPINA3 and its known glycosylated forms, while the lower end of this range may represent less modified protein species. This migration pattern reflects variable glycosylation of this secreted plasma protein, a feature commonly reported for Alpha-1-antichymotrypsin in western blot analysis.

Description

Alpha-1-antichymotrypsin (SERPINA3) is a secreted serine protease inhibitor belonging to the serpin superfamily and is widely recognized as a major acute phase protein in human physiology. SERPINA3 Antibody for western blot is commonly used to detect this protein in plasma and other biological fluids where it is abundantly present due to its role as a circulating inhibitor of chymotrypsin-like proteases. SERPINA3 antibody, also referred to as Alpha-1-antichymotrypsin

antibody or AACT antibody in the literature, is particularly useful for studying secreted protein expression and post-translational modification patterns.

SERPINA3 is primarily synthesized in hepatocytes and secreted into the bloodstream, where it participates in systemic inflammatory responses. Its expression is strongly induced by cytokines such as IL-6 and IL-1 beta, linking it closely to acute phase signaling pathways. Because of its secretory nature, SERPINA3 is readily detected in plasma samples, making western blot analysis a practical approach for evaluating its expression levels under physiological and disease conditions. The protein is typically observed in extracellular compartments rather than intracellular lysates, reflecting its biological function.

A defining feature of SERPINA3 is its extensive glycosylation, which significantly influences its migration behavior in SDS-PAGE. Although the predicted molecular weight based on amino acid sequence is lower, western blot analysis commonly reveals a band or band range at higher apparent molecular weights due to variable glycosylation states. SERPINA3 antibody is therefore valuable for examining these glycosylation-dependent mobility shifts, which may vary depending on tissue source, disease state, or sample processing conditions. This characteristic band pattern is a well-established aspect of Alpha-1-antichymotrypsin detection.

Functionally, SERPINA3 inhibits serine proteases such as cathepsin G and chymotrypsin-like enzymes, thereby limiting proteolytic damage during inflammation. This activity is critical in protecting extracellular matrix components and maintaining tissue integrity during immune responses. SERPINA3 antibody can be used to study protease-antiprotease balance in biological samples, particularly in plasma or serum where circulating inhibitors play a key regulatory role. Changes in SERPINA3 levels or modification states may reflect altered inflammatory status or disease progression.

In pathological contexts, elevated SERPINA3 expression has been associated with cancer, neurodegenerative disease, and chronic inflammatory conditions. Increased circulating levels and altered glycosylation patterns have been reported in various disease states, making SERPINA3 a protein of interest for biomarker research. Western blot detection using SERPINA3 antibody allows researchers to assess both abundance and molecular heterogeneity, providing insight into disease-associated changes at the protein level.

The recombinant rabbit monoclonal clone ADED-19 antibody is designed to detect SERPINA3 with high specificity in western blot applications. Its ability to recognize glycosylated forms of Alpha-1-antichymotrypsin supports reliable detection in plasma-derived samples, where post-translational modification is a key feature of the protein. This makes the antibody a useful tool for studies focused on secreted protein biology, inflammatory signaling, and protease regulation.

For immunohistochemistry-based detection and validation-supported analysis of Alpha-1-antichymotrypsin expression, see our AACT antibody page featuring liver staining and protein microarray specificity data.

Application Notes

Optimal dilution of the SERPINA3 Antibody / Alpha-1-antichymotrypsin Western Blot Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human SERPINA3 / alpha 1 Antichymotrypsin was used as the immunogen for the SERPINA3 antibody.

Storage

Store the SERPINA3 antibody at -20oC.

Alternate Names

Alpha-1-antichymotrypsin antibody, AACT antibody, Serpin family A member 3 antibody, ACT antibody, Acute phase serpin antibody