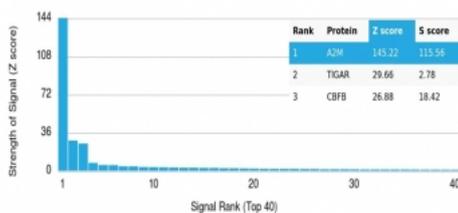


Alpha-2-Macroglobulin Antibody / A2M [clone A2M/6553] (V5392)

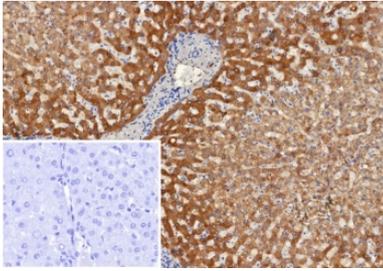
Catalog No.	Formulation	Size
V5392-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5392-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5392SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

[Bulk quote request](#)

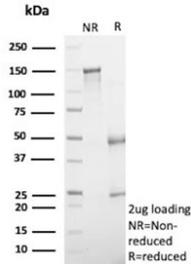
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	A2M/6553
Purity	Protein A/G affinity
UniProt	P01023
Localization	Secreted in plasma
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Alpha-2-Macroglobulin antibody is available for research use only.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using Alpha-2-Macroglobulin antibody (clone A2M/6553). These results demonstrate the foremost specificity of the A2M/6553 mAb. Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (clone MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.



IHC staining of FFPE human liver tissue with Alpha-2-Macroglobulin antibody (clone A2M/6553). Inset: PBS used in place of primary Ab (secondary Ab negative control).
HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free Alpha-2-Macroglobulin antibody (clone A2M/6553) as confirmation of integrity and purity.

Description

Alpha-2-Macroglobulin antibody targets Alpha-2-Macroglobulin, a large secreted plasma glycoprotein encoded by the A2M gene and a major component of the innate protease inhibition system. Alpha-2-Macroglobulin functions as a broad-spectrum protease inhibitor capable of trapping and inactivating a wide range of proteases, including serine, cysteine, aspartic, and metalloproteases. Through this mechanism, Alpha-2-Macroglobulin plays a critical role in regulating proteolysis, inflammation, and tissue remodeling.

Alpha-2-Macroglobulin is synthesized primarily by hepatocytes and secreted into the bloodstream, where it circulates at high concentrations. It is also produced locally by macrophages, fibroblasts, and certain epithelial cells under inflammatory or stress conditions. As a soluble extracellular protein, Alpha-2-Macroglobulin interacts with proteases via a bait region that triggers a conformational change, physically entrapping the protease and targeting the complex for clearance through receptor-mediated endocytosis. A2M antibody detection is therefore relevant for studies of extracellular protease regulation and immune surveillance.

Beyond protease inhibition, Alpha-2-Macroglobulin functions as a carrier protein for cytokines, growth factors, and hormones, including transforming growth factor beta and basic fibroblast growth factor. By binding and modulating the bioavailability of these signaling molecules, Alpha-2-Macroglobulin influences processes such as cell proliferation, wound healing, and immune responses. A2M antibody reagents support investigations into how protease control intersects with growth factor signaling and inflammatory regulation.

Dysregulation of Alpha-2-Macroglobulin expression or function has been associated with numerous disease states. Altered A2M levels have been reported in liver disease, neurodegenerative disorders, cardiovascular disease, and cancer. In the nervous system, Alpha-2-Macroglobulin has been implicated in amyloid beta clearance and neuroinflammation, while in oncology it may influence tumor progression by modulating protease activity within the tumor microenvironment. These diverse biological roles underscore the value of A2M antibody-based detection in both basic and translational research.

Clone A2M/6553 is designed to recognize Alpha-2-Macroglobulin in research applications. Alpha-2-Macroglobulin antibody reagents are suitable for detecting protein expression and distribution in serum, tissues, and cell-derived samples, supporting studies focused on protease regulation, inflammatory processes, and disease-associated alterations in extracellular protein homeostasis.

Application Notes

Optimal dilution of the Alpha-2-Macroglobulin antibody should be determined by the researcher.

Immunogen

A human recombinant A2M protein fragment (within amino acids 604-748) was used as the immunogen for the Alpha-2-Macroglobulin antibody.

Storage

Aliquot the Alpha-2-Macroglobulin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.