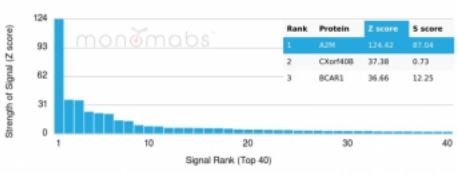
A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody [clone A2M/6554] (V4246)

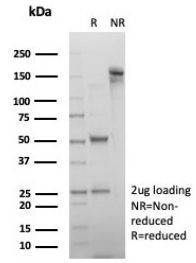
Catalog No.	Formulation	Size
V4246-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4246-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4246SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

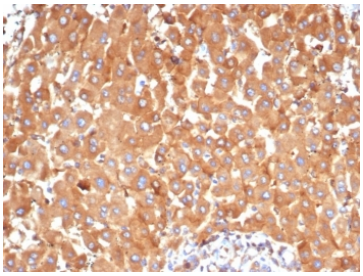
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	A2M/6554
Purity	Protein A/G affinity
UniProt	P01023
Localization	Secreted in plasma
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody is available for research use only.



A2M Antibody Protein Microarray Validation. Protein microarray analysis of A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody using a HuProt array containing more than 19,000 full-length human proteins. A2M produces the dominant signal with a Z-score of approximately 124 and is strongly separated from the next-highest signal, resulting in an S-score of approximately 87. The Z-score represents signal strength relative to the array mean, while the S-score represents separation of the intended target from the next-highest signal. The strong target separation supports the specificity of this A2M Antibody.



A2M Antibody A2M/6554 Purity Analysis by SDS-PAGE. Electrophoretic analysis of purified, BSA-free A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody with 2 ug loaded under reducing (R) and non-reducing (NR) conditions. The reduced sample shows major bands at approximately 50 and 25 kDa, corresponding to antibody heavy and light chains, while the non-reduced sample shows predominantly intact antibody at approximately 150 kDa.



A2M Antibody in Human Hepatocellular Carcinoma IHC. Immunohistochemistry testing of A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody in FFPE human hepatocellular carcinoma tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9, 10 mM Tris with 1 mM EDTA for 20 min followed by cooling prior to staining. Strong, widespread cytoplasmic immunoreactivity is observed in the tumor cells.

Description

A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody recognizes A2M, a large secreted plasma glycoprotein that functions as a broad-spectrum inhibitor of extracellular proteases. A2M can interact with proteases belonging to several catalytic classes and is an important regulator of proteolytic activity in plasma and extracellular environments. The protein is produced prominently by the liver and circulates as a large multimeric complex capable of capturing activated proteases.

A2M contains a protease-sensitive bait region that underlies its distinctive mechanism of protease inhibition. Cleavage of this region induces a substantial conformational change that physically traps the interacting protease and restricts its access to larger protein substrates. Activated A2M-protease complexes can subsequently interact with clearance receptors, including LRP1, facilitating their removal from circulation. This mechanism allows A2M to regulate diverse proteolytic enzymes without functioning as a conventional active-site inhibitor.

A2M also interacts with cytokines, growth factors and other extracellular molecules, extending its biological functions beyond protease regulation. Reported binding partners include transforming growth factor beta and interleukin-6, linking A2M with research into inflammation, extracellular signaling and tissue homeostasis. A2M has additionally been investigated in extracellular matrix remodeling, neurological disease, liver biology and cancer, where altered proteolytic activity and extracellular signaling can influence disease-associated processes.

Clone A2M/6554 is a mouse monoclonal antibody generated against a recombinant fragment corresponding to amino acids 604-748 of human A2M and purified by Protein A/G affinity chromatography. The antibody has been evaluated using a HuProt protein microarray containing more than 19,000 full-length human proteins. NSJ Bioreagents provides this A2M Antibody for research into protease regulation, extracellular protein homeostasis and A2M biology. A Broad-Spectrum Protease Inhibitor Antibody can support investigation of mechanisms controlling extracellular proteolytic activity.

For additional information on A2M biology and a protein microarray-validated reagent with strong tissue-based validation, visit our Alpha-2-Macroglobulin Antibody / A2M Protease Inhibitor Antibody page.

Application Notes

Optimal dilution of the A2M Antibody A2M/6554 / Broad-Spectrum Protease Inhibitor Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein within amino acids 604-748 from the human protein was used as the immunogen for the A2M antibody.

Storage

Aliquot the A2M antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

A2M antibody, alpha-2-macroglobulin antibody, alpha-2-M antibody, protease inhibitor alpha-2-macroglobulin antibody

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