Mouse Serpin A1c/α1-Antitrypsin Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF2979

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Serpin A1c/α1-Antitrypsin in direct ELISAs and Western blots. In direct ELISAs, approximately 70% cross-reactivity with recombinant mouse Serpin A1a is observed, and less than 3% cross-reactivity with recombinant human Serpin A1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Serpin A1c/α1-Antitrypsin Glu25-Lys413 Accession # NP_033271
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

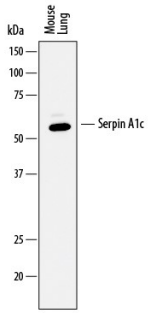
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Simple Western	5 µg/mL	See Below

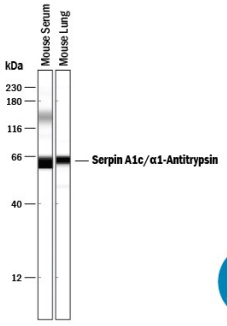
DATA

Western Blot



Detection of Mouse Serpin A1c/α1-Antitrypsin by Western Blot. Western blot shows lysates of mouse lung tissue. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Mouse Serpin A1c/α1-Antitrypsin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2979) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Serpin A1c/α1-Antitrypsin at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Mouse Serpin A1c/α1-Antitrypsin by Simple Western™. Simple Western lane view shows mouse serum and lysates of mouse lung tissue, loaded at 0.2 mg/mL. A specific band was detected for Serpin A1c/α1-Antitrypsin at approximately 62 kDa (as indicated) using 5 µg/mL of Goat Anti-Mouse Serpin A1c/α1-Antitrypsin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2979) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

SerpinA1c (serine proteinase inhibitor-clade A 1c; also alpha-1 protease inhibitor 6 and alpha1 antitrypsin 1-3) is a secreted, 50-55 kDa glycoprotein member of the clade A-subfamily, serpin superfamily of protease inhibitors. There are multiple sources for serpinA1. The circulating form of serpinA1 is expressed by hepatocytes, while local production occurs in the bone marrow by osteoblasts, PMNs, T cells and B cells. SerpinA1 is a naturally occurring serine protease inhibitor. Its principal activity seems to be that of neutralizing neutrophil elastase, an activity that protects the elasticity of the lung during inflammation. It is also posited to play a role in bone marrow progenitor mobilization. Here, it promotes HPC proliferation by blocking cytokine degradation, and interferes with HPC migration by blocking protease cleavage of engaged cell adhesion molecules. Mature mouse serpinA1c is 389 amino acids (aa) in length (aa 25-413) (GenBank#:NP_033271) and contains one active enzymatic site (aa 67-410). Unlike human and rat, the mouse genus contains anywhere from one to seven serpinA1genes. Mus caroli (an Asian species) possesses one gene, Mus saxicola (a south asia species) possesses four genes, and Mus musculus possesses six or more distinct genes. Within Mus musculus, various strains have variable numbers of active genes. While highly homologous, the protein sequences are not identical, and differ most importantly in the reactive center loop region (aa 374-386). The protein referenced here is equivalent to α1-PI-3 (Borriello, F & K.S. Krauter [1991] Proc. Natl. Acad. Sci. USA 88:9417). This gene has one isoform with minimal scattered substitutions and shows more that 98% aa sequence identity (GenBank #:Q00896). Over aa 25-413, serpinA1c/α1-IP-3 shares 97% and 95% aa sequence identity with serpinA1a/α1-PI-1 and serpinA1b/α1-IP-2, respectively. It also shares 77% and 64% aa sequence identity with rat and human serpinA1, respectively.

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