

# $\alpha$ -2 antiplasmin (N-20): sc-67510

## BACKGROUND

The serine proteinase inhibitors (serpins) comprise a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease.  $\alpha$ -2 antiplasmin (also referred to as  $\alpha$ -2-AP or  $\alpha$ -2-plasmin inhibitor) is a member of the serpin family that inhibits plasmin. It is the most potent and rapidly acting of the plasmin inhibitors and is thought to play a key role in the regulation of fibrinolysis and degradation of various other proteins.  $\alpha$ -2 antiplasmin interferes with the binding of plasminogen to Fibrin because lysine residues in its carboxy-terminal region compete with those in Fibrin. As plasmin degrades blood clots, impaired activity of  $\alpha$ -2 antiplasmin leads to a bleeding tendency.

## REFERENCES

1. Lijnen, H.R., Van Hoef, B., Dewerchin, M. and Collen, D. 2000.  $\alpha$ -2 antiplasmin gene deficiency in mice does not affect neointima formation after vascular injury. *Arterioscler. Thromb. Vasc. Biol.* 20: 1488-1492.
2. Lee, K.N., Lee, C.S., Tae, W.C., Jackson, K.W., Christiansen, V.J. and McKee, P.A. 2001. Crosslinking of  $\alpha$ -2 antiplasmin to Fibrin. *Ann. N.Y. Acad. Sci.* 936: 335-339.
3. Lijnen, H.R., Van Hoef, B. and Collen, D. 2001. Inactivation of the serpin  $\alpha$ -2 antiplasmin by stromelysin-1. *Biochim. Biophys. Acta* 1547: 206-213.
4. Ries, M., Easton, R.L., Longstaff, C., Zenker, M., Morris, H.R., Dell, A. and Gaffney, P.J. 2002. Differences between neonates and adults in carbohydrate sequences and reaction kinetics of plasmin and  $\alpha$ -2 antiplasmin. *Thromb. Res.* 105: 247-256.
5. Matsuno, H., Ishisaki, A., Nakajima, K., Okada, K., Ueshima, S., Matsuo, O. and Kozawa, O. 2003. Lack of  $\alpha$ -2 antiplasmin promotes re-endothelialization via over-release of VEGF after vascular injury in mice. *Blood* 102: 3621-3628.

## CHROMOSOMAL LOCATION

Genetic locus: SERPINF2 (human) mapping to 17p13.

## SOURCE

$\alpha$ -2 antiplasmin (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of  $\alpha$ -2 antiplasmin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67510 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

$\alpha$ -2 antiplasmin (N-20) is recommended for detection of  $\alpha$ -2 antiplasmin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for  $\alpha$ -2 antiplasmin siRNA (h): sc-61924,  $\alpha$ -2 antiplasmin shRNA Plasmid (h): sc-61924-SH and  $\alpha$ -2 antiplasmin shRNA (h) Lentiviral Particles: sc-61924-V.

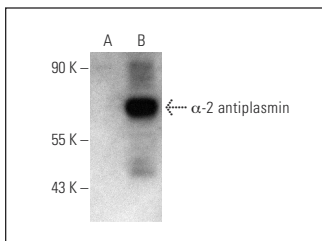
Molecular Weight of  $\alpha$ -2 antiplasmin: 55 kDa.

Positive Controls:  $\alpha$ -2 antiplasmin (h): 293T Lysate: sc-114353 or K-562 whole cell lysate: sc-2203

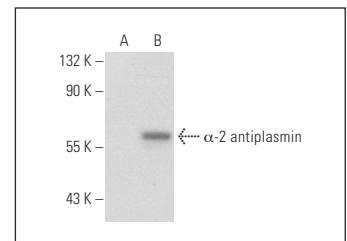
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



$\alpha$ -2 antiplasmin (N-20): sc-67510. Western blot analysis of  $\alpha$ -2 antiplasmin expression in non-transfected (A) and human  $\alpha$ -2 antiplasmin transfected (B) CHO whole cell lysates.



$\alpha$ -2 antiplasmin (N-20): sc-67510. Western blot analysis of  $\alpha$ -2 antiplasmin expression in non-transfected: sc-117752 (A) and human  $\alpha$ -2 antiplasmin transfected: sc-114353 (B) 293T whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.


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Try  $\alpha$ -2 antiplasmin (C-7): sc-515771 or  $\alpha$ -2 antiplasmin (SJ-19): sc-73659, our highly recommended monoclonal alternatives to  $\alpha$ -2 antiplasmin (N-20).