

# $\alpha$ -2 antiplasmin (h2): 293T Lysate: sc-176535

## 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

- 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.
- 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.
- 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.
- 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.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 262850. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- 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.
- Hrynenko, T.V., Zadorozhna, M.B., Platonova, T.M. and Volkov, H.L. 2006. Inhibition with Fibrin, DDE-complex, and D-dimer using  $\alpha$ -2-antiplasmin. *Ukr. Biokhim. Zh.* 77: 45-51.
- Kozek, E., Katra, B., Malecki, M. and Sieradzki, J. 2007. Visceral obesity and hemostatic profile in patients with type 2 diabetes: the effect of gender and metabolic compensation. *Rev. Diabet. Stud.* 1: 122-128.
- Radziwon, P., Olszanski, R., Tomaszewski, R., Lipska, A., Dabrowiecki, Z., Korzeniewski, K., Siermuntowski, P. and Boczkowska-Radziwon, B. 2007. Decreased levels of PAI-1 and  $\alpha$ -2 antiplasmin contribute to enhanced fibrinolytic activity in divers. *Thromb. Res.* 121: 235-240.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: SERPINF2 (human) mapping to 17p13.3.

## PRODUCT

$\alpha$ -2 antiplasmin (h2): 293T Lysate represents a lysate of human  $\alpha$ -2 antiplasmin transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

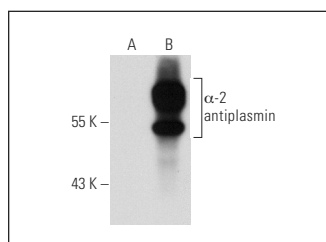
## APPLICATIONS

$\alpha$ -2 antiplasmin (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive  $\alpha$ -2 antiplasmin antibodies. Recommended use: 10-20  $\mu$ l per lane.

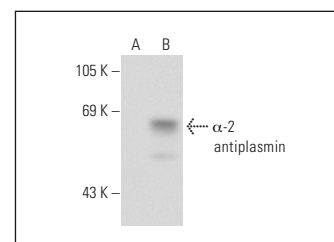
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

$\alpha$ -2 antiplasmin (JJ-16): sc-73658 is recommended as a positive control antibody for Western Blot analysis of enhanced human  $\alpha$ -2 antiplasmin expression in  $\alpha$ -2 antiplasmin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



$\alpha$ -2 antiplasmin (JJ-16): sc-73658. Western blot analysis of  $\alpha$ -2 antiplasmin expression in non-transfected: sc-117752 (A) and human  $\alpha$ -2 antiplasmin transfected: sc-176535 (B) 293T whole cell lysates.



$\alpha$ -2 antiplasmin (JJ-16): sc-73658. Western blot analysis of  $\alpha$ -2 antiplasmin expression in non-transfected: sc-117752 (A) and human  $\alpha$ -2 antiplasmin transfected: sc-176535 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.