SANTA CRUZ BIOTECHNOLOGY, INC.

α-2 antiplasmin (JJ-16): sc-73658

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. α-2 antiplasmin (also referred to as α-2-AP or α-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. α-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 α-2 antiplasmin leads to a bleeding tendency.

REFERENCES

1. Lijnen, H.R., et al. 2000. α-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., et al. 2001. Crosslinking of α-2 antiplasmin to Fibrin. Ann. N.Y. Acad. Sci. 936: 335-339.
3. Lijnen, H.R., et al. 2001. Inactivation of the serpin α-2 antiplasmin by stromelysin-1. Biochim. Biophys. Acta 1547: 206-213.
4. Ries, M., et al. 2002. Differences between neonates and adults in carbohydrate sequences and reaction kinetics of plasmin and α-2 antiplasmin. Thromb. Res. 105: 247-256.
5. 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/
6. Matsuno, H., et al. 2003. Lack of α-2 antiplasmin promotes re-endothelialization via over-release of VEGF after vascular injury in mice. Blood 102: 3621-3628.
7. Hrynenko, T.V., et al. 2006. Inhibition with Fibrin, DDE-complex, and D-dimer using α-2-antiplasmin. Ukr. Biokhim. Zh. 77: 45-51.
8. Kozek, E., et al. 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.
9. Radziwon, P., et al. 2007. Decreased levels of PAI-1 and α-2 antiplasmin contribute to enhanced fibrinolytic activity in divers. Thromb. Res. 121: 235-240.

CHROMOSOMAL LOCATION

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

SOURCE

α-2 antiplasmin (JJ-16) is a mouse monoclonal antibody raised against full length recombinan α-2 antiplasmin of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

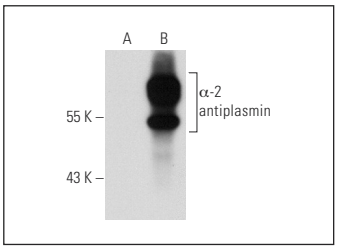
α-2 antiplasmin (JJ-16) is recommended for detection of α-2 antiplasmin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with AAT, AACT, kallistatin or PAI-3.

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

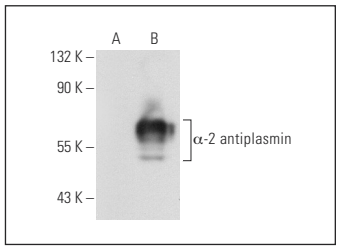
Molecular Weight of α-2 antiplasmin: 55 kDa.

Positive Controls: α-2 antiplasmin (h): 293T Lysate: sc-114353.

DATA



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



α-2 antiplasmin (JJ-16): sc-73658. Western blot analysis of α-2 antiplasmin expression in non-transfected: sc-117752 (**A**) and human α-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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.