SANTA CRUZ BIOTECHNOLOGY, INC.

SerpinA3k (T-13): sc-162175

BACKGROUND

The serine proteinase inhibitors (serpins) compose 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. SerpinA3k (serine protease inhibitor A3K), also known as contrapsin, SPI-2 or Mcm2, is a 418 amino acid murine protein that inhibits trypsin-like proteases and belongs to the serpin family. Expressed in liver and secreted in plasma, SerpinA3k is encoded by a gene that maps to murine chromosome 12 E.

REFERENCES

1. Le Cam, A., et al. 1987. Study of a growth hormone-regulated protein secreted by rat hepatocytes: cDNA cloning, anti-protease activity and regulation of its synthesis by various hormones. EMBO J. 6: 1225-1232.
2. Billingsley, G.D., et al. 1993. Physical mapping of four serpin genes: α1-antitrypsin, α1-antichymotrypsin, corticosteroid-binding globulin, and protein C inhibitor, within a 280-kb region on chromosome I4q32.1. Am. J. Hum. Genet. 52: 343-353.
3. Forsyth, S., et al. 2003. A review and comparison of the murine α1-antitrypsin and α1-antichymotrypsin multigene clusters with the human clade A serpins. Genomics 81: 336-345.
4. Horvath, A.J., et al. 2004. Expression patterns of murine antichymotrypsin-like genes reflect evolutionary divergence at the SerpinA3 locus. J. Mol. Evol. 59: 488-497.
5. Horvath, A.J., et al. 2005. The murine orthologue of human antichymotrypsin: a structural paradigm for clade A3 serpins. J. Biol. Chem. 280: 43168-43178.
6. Winkler, I.G., et al. 2005. Serine protease inhibitors SerpinA1 and SerpinA3 are down-regulated in bone marrow during hematopoietic progenitor mobilization. J. Exp. Med. 201: 1077-1088.

CHROMOSOMAL LOCATION

Genetic locus: Serpina3k (rat) mapping to 6q32.

SOURCE

SerpinA3k (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SerpinA3k of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162175 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SerpinA3k (T-13) is recommended for detection of SerpinA3k of rat 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)], 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).

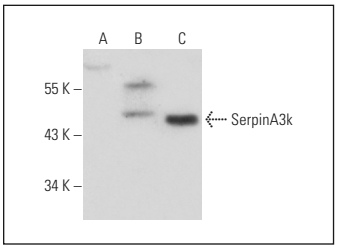
Molecular Weight of SerpinA3k: 47 kDa.

Positive Controls: SerpinA3k (m): 293T Lysate: sc-123488 or mouse liver extract: sc-2256.

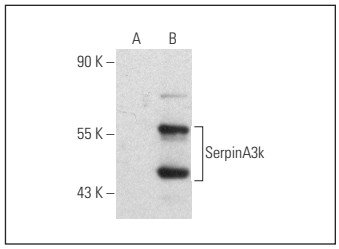
RECOMMENDED SECONDARY REAGENTS

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



SerpinA3k (T-13): sc-162175. Western blot analysis of SerpinA3k expression in non-transfected: sc-117752 (**A**) and mouse SerpinA3k transfected: sc-123488 (**B**) 293T whole cell lysates and mouse liver tissue extract (**C**).



SerpinA3k (T-13): sc-162175. Western blot analysis of SerpinA3k expression in non-transfected: sc-117752 (**A**) and mouse SerpinA3k transfected: sc-123489 (**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 or our catalog for detailed protocols and support products.