SerpinA3g (MoFo29.2): sc-57013



The Power to Question

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. SerpinA3g has an unusual reactive site Cys-Cys sequence, a unique C-terminal extension, but no usual cleavable N-terminal signal sequence. It localizes to the nucleus and is expressed at high levels in haemopoietic progenitors, and is down-regulated upon differentiation. This serpin is also dramatically up-regulated on T-cell activation as well as in macrophages during infection with Salmonella typhimurium and Listeria monocytogenes. SerpinA3g is activated by IFN- γ and NF κ B, and it may mediate its biological effects via interaction with non-protease intracellular targets.

REFERENCES

- Hampson, I.N., Hampson, L., Pinkoski, M., Cross, M., Heyworth, C.M., Bleackley, R.C., Atkinson, E. and Dexter, T.M. 1997. Identification of a serpin specifically expressed in multipotent and bipotent hematopoietic progenitor cells and in activated T cells. Blood 89: 108-118.
- Hampson, L., Hampson, I.N., Babichuk, C.K., Cotter, L., Bleackley, R.C., Dexter, T.M. and Cross, M.A. 2001. A minimal serpin promoter with high activity in haematopoietic progenitors and activated T cells. Hematol. J. 2: 150-160.
- Hamerman, J.A., Hayashi, F., Schroeder, L.A., Gygi, S.P., Haas, A.L., Hampson, L., Coughlin, P., Aebersold, R. and Aderem, A. 2002. Serpin 2A is induced in activated macrophages and conjugates to a ubiquitin homolog. J. Immunol. 168: 2415-2423.
- Gettins, P.G. 2002. Serpin structure, mechanism, and function. Chem. Rev. 102: 4751-4804.
- Carrell, R.W. and Huntington, J.A. 2003. How serpins change their fold for better and for worse. Biochem. Soc. Symp. 70: 163-178.
- Morris, E.C., Dafforn, T.R., Forsyth, S.L., Missen, M.A., Horvath, A.J., Hampson, L., Hampson, I.N., Currie, G., Carrell, R.W. and Coughlin, P.B. 2003. Murine Serpin 2A is a redox-sensitive intracellular protein. Biochem. J. 371: 165-173.
- van Gent, D., Sharp, P., Morgan, K. and Kalsheker, N. 2003. Serpins: structure, function and molecular evolution. Int. J. Biochem. Cell Biol. 35: 1536-1547.
- 8. Stanley, P. and Stein, P.E. 2003. BmSPN2, a serpin secreted by the filarial nematode *Brugia malayi*, does not inhibit human neutrophil proteinases but plays a noninhibitory role. Biochemistry 42: 6241-6248.
- 9. Silverman, G.A., et al. 2004. Human clade B serpins (ov-serpins) belong to a cohort of evolutionarily dispersed intracellular proteinase inhibitor clades that protect cells from promiscuous proteolysis. Cell. Mol. Life Sci. 61: 301-325.

CHROMOSOMAL LOCATION

Genetic locus: Serpina3g (mouse) mapping to 12 E.

SOURCE

SerpinA3g (MoFo29.2) is a Armenian hamster monoclonal antibody raised against amino acids 418-436 of SerpinA3g of mouse origin.

PRODUCT

Each vial contains 100 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

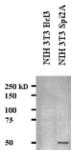
SerpinA3g (MoFo29.2) is recommended for detection of SerpinA3g of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for SerpinA3g siRNA (m): sc-153360, SerpinA3g shRNA Plasmid (m): sc-153360-SH and SerpinA3g shRNA (m) Lentiviral Particles: sc-153360-V.

Molecular Weight of SerpinA3g: 49 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

DATA



SELECT PRODUCT CITATIONS

 Wang, X., Ding, Y., Li, R., Zhang, R., Ge, X., Gao, R., Wang, M., Huang, Y., Zhang, F., Zhao, B., Liao, W. and Du, J. 2023. N⁶-methyladenosine of Spi2a attenuates inflammation and sepsis-associated myocardial dysfunction in mice. Nat. Commun. 14: 1185.

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.