

# SerpinA9 (913G2V): sc-517654

## BACKGROUND

SerpinA9 (serpin peptidase inhibitor, clade A ( $\alpha$ -1 antitrypsin, antitrypsin), member 9) is a 417 amino acid protein that belongs to the serpin family. A protease inhibitor that inhibits trypsin and trypsin-like serine proteases (*in vitro*), SerpinA9 inhibits plasmin and thrombin with lower efficiency (*in vitro*). The SerpinA9 protein is highly expressed in normal germinal center (GC) B-cells and GC B-cell-derived malignancies. In humans, SerpinA9 is part of a gene cluster, which spans over 370 kb on chromosome 14q32.1 and includes ten additional members of the Serpin superfamily. All Serpin genes have a significant sequence similarity and most share a common gene structure with one untranslated exon and four coding exons. Accordingly, it has been proposed that members of the Serpin superfamily evolved from a common ancestral gene through a series of duplication events. Existing as seven alternatively spliced isoforms, the SerpinA9 gene is conserved in chimpanzee, canine, mouse, rat and zebrafish, and maps to human chromosome 14q32.13.

## REFERENCES

1. Rollini, P. and Fournier, R.E. 1999. Long-range chromatin reorganization of the human serpin gene cluster at 14q32.1 accompanies gene activation and extinction in microcell hybrids. *Genomics* 56: 22-30.
2. Rollini, P. and Fournier, R.E. 2000. Differential regulation of gene activity and chromatin structure within the human serpin gene cluster at 14q32.1 in macrophage microcell hybrids. *Nucleic Acids Res.* 28: 1767-1777.
3. Namciu, S.J., Friedman, R.D., Marsden, M.D., Sarausad, L.M., Jasoni, C.L. and Fournier, R.E. 2004. Sequence organization and matrix attachment regions of the human serine protease inhibitor gene cluster at 14q32.1. *Mamm. Genome* 15: 162-178.
4. Marsden, M.D. and Fournier, R.E. 2005. Organization and expression of the human serpin gene cluster at 14q32.1. *Front. Biosci.* 10: 1768-1778.
5. Seixas, S., Suriano, G., Carvalho, F., Seruca, R., Rocha, J. and Di Rienzo, A. 2007. Sequence diversity at the proximal 14q32.1 SERPIN subcluster: evidence for natural selection favoring the pseudogenization of SERPINA2. *Mol. Biol. Evol.* 24: 587-598.
6. Silverman, G.A., Whisstock, J.C., Bottomley, S.P., Huntington, J.A., Kaiserman, D., Luke, C.J., Pak, S.C., Reichhart, J.M. and Bird, P.I. 2010. Serpins flex their muscle: I. Putting the clamps on proteolysis in diverse biological systems. *J. Biol. Chem.* 285: 24299-24305.

## CHROMOSOMAL LOCATION

Genetic locus: SERPINA9 (human) mapping to 14q32.13.

## SOURCE

SerpinA9 (913G2V) is a mouse monoclonal antibody raised against a KLH-coupled peptide corresponding to amino acids 158-186 of SerpinA9 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SerpinA9 (913G2V) is recommended for detection of SerpinA9 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for SerpinA9 siRNA (h): sc-92169, SerpinA9 siRNA (m): sc-105391, SerpinA9 shRNA Plasmid (h): sc-92169-SH, SerpinA9 shRNA Plasmid (m): sc-105391-SH, SerpinA9 shRNA (h) Lentiviral Particles: sc-92169-V and SerpinA9 shRNA (m) Lentiviral Particles: sc-105391-V.

Molecular Weight of SerpinA9 isoform 1/2/3/4: 47/38/22/38 kDa.

Molecular Weight of SerpinA9 isoform 5/6/7: 32/38/49 kDa.

## 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](http://www.scbt.com) for detailed protocols and support products.