

# SERPINE3 (D-20): sc-248560

## BACKGROUND

SERPINE3 (serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 3) is a 424 amino acid secreted protein that belongs to the serpin family. SERPINE3 is considered a probable serine protease inhibitor. The expression profile of SERPINE3 is more restricted than that of SERPINB8, with highest levels found in neural tissues, such as brain, pituitary and spinal cord. PCSK4, a member of the proprotein convertase family, correlates in expression with SERPINE3, with an overall value of 0.9. It has been suggested that SERPINE3 is the cognate inhibitor of PCSK4 *in vivo*. Existing as two alternatively spliced isoforms, the SERPINE3 gene is conserved in chimpanzee, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 13q14.3. Comprising nearly 4% of human DNA, chromosome 13 contains around 114 million base pairs and 400 genes. As with most chromosomes, polysomy of part or all of chromosome 13 is deleterious to development and decreases the odds of survival. Trisomy 13, also known as Patau syndrome, is quite deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

## REFERENCES

- Dunham, A., Matthews, L.H., Burton, J., Ashurst, J.L., Howe, K.L., Ashcroft, K.J., Beare, D.M., Burford, D.C., Hunt, S.E., Griffiths-Jones, S., et al. 2004. The DNA sequence and analysis of human chromosome 13. *Nature* 428: 522-528.
- Badola, S., Spurling, H., Robison, K., Fedyk, E.R., Silverman, G.A., Strayle, J., Kapeller, R. and Tsu, C.A. 2006. Correlation of serpin-protease expression by comparative analysis of real-time PCR profiling data. *Genomics* 88: 173-184.
- Hsu, H.F. and Hou, J.W. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. *Am. J. Med. Genet. A* 143A: 1739-1748.
- Hall, H.E., Chan, E.R., Collins, A., Judis, L., Shirley, S., Surti, U., Hoffner, L., Cockwell, A.E., Jacobs, P.A. and Hassold, T.J. 2007. The origin of trisomy 13. *Am. J. Med. Genet. A* 143A: 2242-2248.
- Bugge, M., Collins, A., Hertz, J.M., Eiberg, H., Lundsteen, C., Brandt, C.A., Bak, M., Hansen, C., Delozier, C.D., Lespinasse, J., Tranebjaerg, L., Hahnemann, J.M., Rasmussen, K., Bruun-Petersen, G., Duprez, L., Tommerup, N. and Petersen, M.B. 2007. Non-disjunction of chromosome 13. *Hum. Mol. Genet.* 16: 2004-2010.
- Kumar, A. and Ragg, H. 2008. Ancestry and evolution of a secretory pathway serpin. *BMC Evol. Biol.* 8: 250.

## CHROMOSOMAL LOCATION

Genetic locus: SERPINE3 (human) mapping to 13q14.3.

## SOURCE

SERPINE3 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SERPINE3 of human 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-248560 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SERPINE3 (D-20) is recommended for detection of SERPINE3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 SERPINE3 isoforms 1/2: 47/44 kDa.

## 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) 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.

## 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) or our catalog for detailed protocols and support products.