SANTA CRUZ BIOTECHNOLOGY, INC.

cystatin SN (SN21): sc-73885

BACKGROUND

The cystatin superfamily is a well-established family of cysteine protease inhibitors. Cystatins A and B (type 1) are mainly intracellular; cystatins C, D, E/M, F, G, S, SN and SA cystatins are extracellular (type 2); and the kininogens are type 3 cystatins which are intravascular proteins. All true cystatins inhibit cysteine peptidases of the papain family, such as cathepsins, and some also inhibit legumain family enzymes. Cystatin SA, cystatin S and cystatin SN are found primarily in saliva; cystatin S and SN can also be expressed in tears, urine and seminal fluid. Cystatin C is a related protein which is expressed in the brain, thymus, ovary, epididymis and vas deferens. Cystatin D protects against proteinases in the oral cavity, while cystatin E/M and F moderate the inhibition of cathepsin proteins. The fetuins, part of the cystatin superfamily, are secretable proteins that influence osteogenesis and bone resorption, regulation of the Insulin and hepatocyte growth factor receptors and the re-sponse to systemic inflammation. High molecular weight kininogen (Kininogen HC) and low molecular weight kininogen (Kininogen LC) have varied roles, though they both inhibit the thrombin- and plasmin-induced aggregation of thrombocytes.

REFERENCES

1. Saitoh, E., et al. 1988. Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily related to family III cystatin genes. Biol. Chem. Hoppe Seyle 369: 191-197.
2. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604312. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Nishio, C., et al. 2000. Involvement of cystatin C in oxidative stress-induced apoptosis of cultured rat CNS neurons. Brain Res. 873: 252-262.
4. Manoury, B., el al. 2001. Bm-CPI-2, a cystatin homolog secreted by the filarial parasite *Brugia malayi*, inhibits class II MHC-restricted antigen processing. Curr. Biol. 11: 447-451.
5. Janowski, R., el al. 2001. Human cystatin C, an amyloidogenic protein, dimerizes through three-dimensional domain swapping. Nat. Struct. Mol. Biol. 8: 316-320.
6. Aras, O., el al. 2001. Cystatin C is an independent predictor of fasting and post-methionine load total homocysteine concentrations among stable renal transplant recipients. Clin. Chem. 47: 1263-1268.

CHROMOSOMAL LOCATION

Genetic locus: CST1 (human) mapping to 20p11.21.

SOURCE

cystatin SN (SN21) is a mouse monoclonal antibody raised against full length recombinant cystatin SN of human origin, with epitope mapping to 21-141.

PRODUCT

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

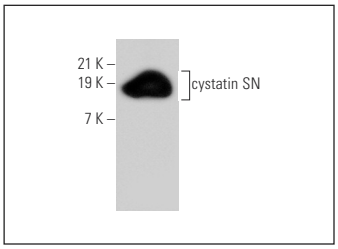
APPLICATIONS

cystatin SN (SN21) is recommended for detection of cystatin SN 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).

Suitable for use as control antibody for cystatin S/SA/SN siRNA (h): sc-44521, cystatin S/SA/SN shRNA Plasmid (h): sc-44521-SH and cystatin S/SA/SN shRNA (h) Lentiviral Particles: sc-44521-V.

Positive Controls: human salivary gland extract: sc-363762.

DATA



cystatin SN (SN21): sc-73885. Western blot analysis of cystatin SN expression in human salivary gland tissue extract.

SELECT PRODUCT CITATIONS

1. Dsamou, M., et al. 2012. Salivary protein profiles and sensitivity to the bitter taste of caffeine. Chem. Senses 37: 87-95.

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.