Cystatin SN (MM0234-5N51): sc-517460



The Power to Questio

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 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 response to systemic inflammation. High molecular weight kiningen (Kiningen HC) and low molecular weight kiningeen (Kiningen LC) have varied roles, though they both inhibit the thrombin- and plasmin-induced aggregation of thrombocytes.

REFERENCES

- Saitoh, E., Isemura, S., Sanada, K., Kim, H.S., Smithies, O. and Maeda, N. 1988. Cystatin superfamily. Evidence that family II cystatin genes are evolutionarily related to family III cystatin genes. Biol. Chem. Hoppe-Seyler 369: 191-197.
- 2. Nishio, C., Yoshida, K., Nishiyama, K., Hatanaka, H. and Yamada, M. 2000. Involvement of cystatin C in oxidative stress-induced apoptosis of cultured rat CNS neurons. Brain Res. 873: 252-262.
- 3. Manoury, B., Gregory, W.F., Maizels, R.M. and Watts, C. 2001. Bm-CPl-2, a cystatin homolog secreted by the filarial parasite Brugia malayi, inhibits class II MHC-restricted antigen processing. Curr. Biol. 11: 447-451.
- Janowski, R., Kozak, M., Jankowska, E., Grzonka, Z., Grubb, A., Abrahamson, M. and Jaskolski, M. 2001. Human cystatin C, an amyloidogenic protein, dimerizes through three-dimensional domain swapping. Nat. Struct. Mol. Biol. 8: 316-320.
- Aras, O., Tsai, M.Y., Hanson, N.Q., Bailey, R., Rao, G. and Hunninghake, D.B. 2001. Cystatin C is an independent predictor of fasting and postmethionine load total homocysteine concentrations among stable renal transplant recipients. Clin. Chem. 47: 1263-1268.
- 6. Calero, M., Pawlik, M., Soto, C., Castaño, E.M., Sigurdsson, E.M., Kumar, A., Gallo, G., Frangione, B. and Levy, E. 2001. Distinct properties of wild-type and the amyloidogenic human cystatin C variant of hereditary cerebral hemorrhage with amyloidosis, Icelandic type. J. Neurochem. 77: 628-637.
- Abrahamson, M., Alvarez-Fernandez, M. and Nathanson, C.M. 2003. Cystatins. Biochem. Soc. Symp. 70: 179-199.
- 8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 604312: World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

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

SOURCE

Cystatin SN (MM0234-5N51) is a mouse monoclonal antibody raised against a recombinant protein corresponding to Cystatin SN of human origin.

PRODUCT

Each vial contains 100 μg lgG_2 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cystatin SN (MM0234-5N51) is recommended for detection of Cystatin SN of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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.

Molecular Weight of Cystatin SN: 16 kDa.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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