SANTA CRUZ BIOTECHNOLOGY, INC.

cystatin D (N-19): sc-46890

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 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, S and 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 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-Seyler 369 Suppl: 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.

CHROMOSOMAL LOCATION

Genetic locus: CST5 (human) mapping to 20p11.21.

SOURCE

cystatin D (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of cystatin D 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-46890 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

cystatin D (N-19) is recommended for detection of mature cystatin D and cystatin D precursor 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)], 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).

Suitable for use as control antibody for cystatin D siRNA (h): sc-60489, cystatin D shRNA Plasmid (h): sc-60489-SH and cystatin D shRNA (h) Lentiviral Particles: sc-60489-V.

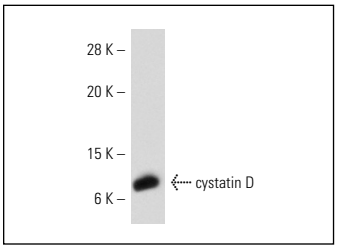
Molecular Weight of cystatin D: 13 kDa.

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

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



cystatin D (N-19): sc-46890. Western blot analysis of cystatin D expression in human salivary gland tissue extract.

SELECT PRODUCT CITATIONS

1. Ordon ez-Moran, P., et al. 2010. The effects of 1,25-dihydroxyvitamin D3 on colon cancer cells depend on RhoA-ROCK-p38MAPK-MSK signaling. J. Steroid Biochem. Mol. Biol. 121: 355-361.