SANTA CRUZ BIOTECHNOLOGY, INC.

cystatin B (M-15): sc-33276

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The Power to Question

BACKGROUND

Cystatin A (also designated STF1, STFA, stefin A or cystatin AS) and cystatin B (also designated PME, CST6, STFB, CPI-B, stefin B and liver thiol proteinase inhibitor) are thiol protease inhibitors that form complexes with Papain and the cathepsins B, H and L. Cystatin A, a cytoplasmic protein, is one of the precursor proteins of the cornified cell envelope in keratinocytes and plays a role in epidermal development and maintenance. Cystatin B protects against intracellular proteases leaking out of lysosomes and is primarily expressed in heart, liver and kidney.

REFERENCES

1. Ritonja, A., et al. 1985. Amino acid sequence of the intracellular cysteine proteinase inhibitor cystatin B from human liver. Biochem. Biophys. Res. Commun. 131: 1187-1192.
2. Jerala, R., et al. 1988. Cloning a synthetic gene for human stefin B and its expression in *E. coli*. FEBS Lett. 239: 41-44.
3. Pennacchio, L.A., et al. 1996. Mutations in the gene encoding cystatin B in progressive myoclonus epilepsy (EPM1). Science 271: 1731-1734.
4. Kos, J., et al. 1998. Cysteine proteinases and their endogenous inhibitors: target proteins for prognosis, diagnosis and therapy in cancer (review). Oncol. Rep. 5: 1349-1361.
5. Takahashi, H., et al. 1998. Structure and transcriptional regulation of the human cystatin A gene. The 12-O-tetradecanoylphorbol-13-acetate (TPA) responsive element-2 site (-272 to -278) on cystatin A gene is critical for TPA-dependent regulation. J. Biol. Chem. 273: 17375-17380.
6. Takahashi, H., et al. 2001. Expression of human cystatin A by keratinocytes is positively regulated via the Ras/MEKK1/MKK7/JNK signal transduction pathway but negatively regulated via the Ras/Raf-1/MEK1/ERK pathway. J. Biol. Chem. 276: 36632-36638.
7. Jenko, S., et al. 2004. Different propensity to form amyloid fibrils by two homologous proteins–Human stefins A and B: searching for an explanation. Proteins 55: 417-425.

CHROMOSOMAL LOCATION

Genetic locus: Cstb (mouse) mapping to 10 C1.

SOURCE

cystatin B (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of cystatin B of mouse 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-33276 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

cystatin B (M-15) is recommended for detection of cystatin B of mouse and rat 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).

Suitable for use as control antibody for cystatin B siRNA (m): sc-44743.

Molecular Weight of cystatin B: 12 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.

PROTOCOLS

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