

cathepsin H (5): sc-130310

BACKGROUND

Cathepsin H (also designated N-benzoylarginine- β -naphthylamide hydrolase, aleurain, cathepsin B3 or cathepsin BA) is a lysosomal cysteine proteinase that mediates degradation of lysosomal proteins. Cathepsin H is a disulfide-linked heavy and light chain dimer produced from a single precursor protein. The encoded protein, which belongs to the peptidase C1 protein family, can act both as an aminopeptidase and as an endopeptidase. Elevated levels of cathepsin H correlates with malignant progression of prostate tumors. Two transcript variants encoding different isoforms have been found for this gene. Full-length and truncated cathepsin H [12 amino acid deletion in the signal peptide region (CTSH Δ 10-21)] are expressed in prostate tissues, LNCaP, PC-3 and DU-145 prostate cancer cell lines. Cathepsin H mediates maturation of the biologically active surfactant protein-B (SP-B) peptide.

REFERENCES

1. Lafuse, W.P., et al. 1995. IFN- γ increases cathepsin H mRNA levels in mouse macrophages. *J. Leukoc. Biol.* 57: 663-669.
2. Claus, V., et al. 1998. Lysosomal enzyme trafficking between phagosomes, endosomes and lysosomes in J774 macrophages. Enrichment of cathepsin H in early endosomes. *J. Biol. Chem.* 273: 9842-9851.
3. Waghray, A., et al. 2002. Analysis of a truncated form of cathepsin H in human prostate tumor cells. *J. Biol. Chem.* 277: 11533-11538.
4. Dodt, J., et al. 2003. Human cathepsin H: deletion of the mini-chain switches substrate specificity from aminopeptidase to endopeptidase. *Biol. Chem.* 384: 1327-1332.
5. Brguljan, P.M., et al. 2003. Human brain cathepsin H as a neuropeptide and bradykinin metabolizing enzyme. *Peptides* 24: 1977-1984.
6. Ueno, T., et al. 2004. Processing of pulmonary surfactant protein B by napsin and cathepsin H. *J. Biol. Chem.* 279: 16178-16184.
7. Horn, M., et al. 2005. Activation processing of cathepsin H impairs recognition by its propeptide. *Biol. Chem.* 386: 941-947.

CHROMOSOMAL LOCATION

Genetic locus: CTSH (human) mapping to 15q25.1.

SOURCE

cathepsin H (5) is a mouse monoclonal antibody raised against recombinant cathepsin H of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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

cathepsin H (5) is recommended for detection of cathepsin H of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

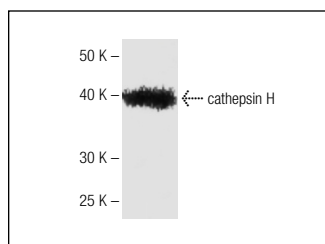
Suitable for use as control antibody for cathepsin H siRNA (h): sc-29240, cathepsin H shRNA Plasmid (h): sc-29240-SH and cathepsin H shRNA (h) Lentiviral Particles: sc-29240-V.

Molecular Weight of cathepsin H: 28 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

DATA



cathepsin H (5): sc-130310. Western blot analysis of human recombinant cathepsin H.

PROTOCOLS

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