### SANTA CRUZ BIOTECHNOLOGY, INC.

# cathepsin G (H-40): sc-33206



#### BACKGROUND

The cathepsin family of proteolytic enzymes contains several diverse classes of proteases. The cysteine protease class comprises cathepsins B, L, H, K, S and O. The aspartyl protease class is composed of cathepsins D and E. Cathepsin G is in the serine protease class. Most cathepsins are lysosomal and each is involved in cellular metabolism, participating in various events such as peptide biosynthesis and protein degradation. Cathepsin G expression is restricted to bone marrow and early myeloid cells.

#### **REFERENCES**

- Ishidoh, K., et al. 1987. Molecular cloning and sequencing of cDNA for rat cathepsin L. FEBS Lett. 223: 69-73.
- Ishidoh, K., et al. 1987. Molecular cloning and sequencing of cDNA for rat cathepsin H. Homology in pro-peptide regions of cysteine proteases. FEBS Lett. 226: 33-37.
- 3. Redecker, B., et al. 1991. Molecular organization of the human cathepsin D gene. DNA Cell Biol. 10: 423-431.
- Shi, G.P., et al. 1992. Molecular cloning and expression of human alveolar macrophage cathepsin S, an elastinolytic cysteine protease. J. Biol. Chem. 267: 7258-7262.
- Heusel, J.W., et al. 1993. Molecular cloning, chromosomal location and tissue-specific expression of the murine cathepsin G gene. Blood 81: 1614-1623.
- Guenette, R.S., et al. 1994. Cathepsin B, a cysteine protease implicated in metastatic progression, is also expressed during regression of the rat prostate and mammary glands. Eur. J. Biochem. 226: 311-321.
- Shi, G.P., et al. 1995. Molecular cloning of human cathepsin O, a novel endoproteinase and homologue of rabbit OC2. FEBS Lett. 357: 129-134.

#### CHROMOSOMAL LOCATION

Genetic locus: CTSG (human) mapping to 14q12.

#### SOURCE

cathepsin G (H-40) is a rabbit polyclonal antibody raised against amino acids 216-255 mapping at the C-terminus of cathepsin G of human origin.

#### PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### **STORAGE**

Store at 4° C, \*\*D0 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 G (H-40) is recommended for detection of cathepsin G of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

Suitable for use as control antibody for cathepsin G siRNA (h): sc-41477, cathepsin G shRNA Plasmid (h): sc-41477-SH and cathepsin G shRNA (h) Lentiviral Particles: sc-41477-V.

Molecular Weight of cathepsin G: 32 kDa.

Positive Controls: NK-92 whole cell lysate: sc-364788.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immuno-histochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

#### DATA



cathepsin G (H-40): sc-33206. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic and nuclear staining of hematonoietic cells.

#### SELECT PRODUCT CITATIONS

 Conrotto, P., et al. 2008. Identification of new accessible tumor antigens in human colon cancer by *ex vivo* protein biotinylation and comparative mass spectrometry analysis. Int. J. Cancer 123: 2856-2864.

#### **PROTOCOLS**

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

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