SANTA CRUZ BIOTECHNOLOGY, INC.

Lysozyme C (M-62): sc-292850

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The origins of the lysozyme proteins date back an estimated 400 to 600 million years. Generally, lysozyme genes are relatively small, roughly 10 kilobases in length, and composed of four exons and three introns. Originally a bacteriolytic defensive agent, the function of this family of proteins adapted to serve a digestive function in its present forms. Lysozymes in tissues and body fluids are associated with the monocyte-macrophage system and enhance the activity of immunoagents. Lysozyme C belongs to the glycosyl hydrolase 22 family, and newly identified relatives of Lysozyme C appear to possess anti-HIV activity, as well as preserved bacteriolytic function against micrococcus lysodeikticus. Lysozyme C is capable of both hydrolysis and transglycosylation and also a slight esterase activity. It acts rapidly on both peptide-substituted and unsubstituted peptidoglycan, and slowly on chitin oligosaccharides. Lysozyme C defects are a cause of amyloidosis VIII, also called familial visceral or Ostertag-type amyloidosis.

REFERENCES

1. Canfield, R.E., et al. 1971. Primary structure of lysozymes from man and goose. Nat. New Biol. 232: 16-17.
2. Peters, C.W., et al. 1989. The human lysozyme gene. Sequence organization and chromosomal localization. Eur. J. Biochem. 182: 507-516.
3. Irwin, D.M., et al. 1996. Isolation and characterization of vertebrate lysozyme genes. EXS 75: 225-241.
4. Qasba, P.K., et al. 1997. Molecular divergence of lysozymes and α-lactalbumin. Crit. Rev. Biochem. Mol. Biol. 32: 255-306.
5. Lee-Huang, S., et al. 1999. Lysozyme and RNases as anti-HIV components in β-core preparations of human chorionic gonadotropin. Proc. Natl. Acad. Sci. USA 196: 2678-2681.
6. Fujiki, K., et al. 2000. Molecular cloning of carp (cyprinus carpio) leucocyte cell-derived chemotaxin 2, glia maturation factor β, CD45 and lysozyme C by use of suppression subtractive hybridisation. Fish Shellfish Immunol. 10: 643-650.
7. Liu, F., et al. 2002. Cloning and expression pattern of the lysozyme C gene in zebrafish. Mech. Dev. 113: 69-72.

CHROMOSOMAL LOCATION

Genetic locus: Lyz2 (mouse) mapping to 10 D2.

SOURCE

Lysozyme C (M-62) is a rabbit polyclonal antibody raised against amino acids 87-148 mapping at the C-terminus of Lysozyme C 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.

STORAGE

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

APPLICATIONS

Lysozyme C (M-62) is recommended for detection of Lysozyme C of mouse and rat 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).

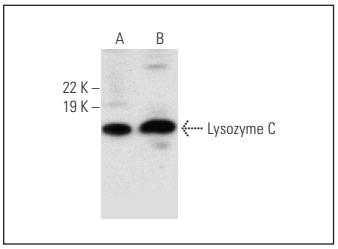
Molecular Weight of Lysozyme C: 17 kDa.

Positive Controls: mouse spleen extract: sc-2391 or RAW 264.7 whole cell lysate: sc-2211.

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.

DATA



Lysozyme C (M-62): sc-292850. Western blot analysis of Lysozyme C expression in mouse spleen tissue extract (**A**) and Raw 264.7 whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. Costello, C.M., et al. 2014. Synthetic small intestinal scaffolds for improved studies of intestinal differentiation. Biotechnol. Bioeng. 111: 1222-1232.

RESEARCH USE

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

PROTOCOLS

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