SANTA CRUZ BIOTECHNOLOGY, INC.

Lysozyme C (H-10): sc-518083

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 ten 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.

CHROMOSOMAL LOCATION

Genetic locus: Lyz1/Lyz2 (mouse) mapping to 10 D2.

SOURCE

Lysozyme C (H-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 56-73 within an internal region of Lysozyme C of mouse origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lysozyme C (H-10) is available conjugated to agarose (sc-518083 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518083 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518083 PE), fluorescein (sc-518083 FITC), Alexa Fluor® 488 (sc-518083 AF488), Alexa Fluor® 546 (sc-518083 AF546), Alexa Fluor® 594 (sc-518083 AF594) or Alexa Fluor® 647 (sc-518083 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518083 AF680) or Alexa Fluor® 790 (sc-518083 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Lysozyme C (H-10) is recommended for detection of Lysozyme C of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 pan Lysozyme C siRNA (m): sc-45936, pan Lysozyme C shRNA Plasmid (m): sc-45936-SH and pan Lysozyme C shRNA (m) Lentiviral Particles: sc-45936-V.

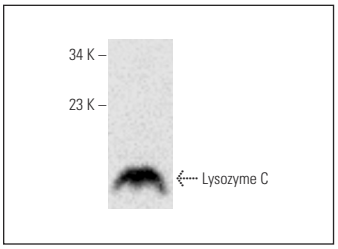
Molecular Weight of Lysozyme C: 16 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Lysozyme C (H-10): sc-518083. Western blot analysis of Lysozyme C expression in RAW 264.7 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

SELECT PRODUCT CITATIONS

1. Annunziata, F., et al. 2022. Paneth cells drive intestinal stem cell competition and clonality in aging and calorie restriction. Eur. J. Cell Biol. 101: 151282.

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.