

Lysozyme C (E-5): sc-518012

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 4 exons and 3 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 immunogens. 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.

CHROMOSOMAL LOCATION

Genetic locus: LYZ (human) mapping to 12q15.

SOURCE

Lysozyme C (E-5) is a mouse monoclonal antibody raised against amino acids 78-148 mapping at the C-terminus of Lysozyme C of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lysozyme C (E-5) is available conjugated to agarose (sc-518012 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518012 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518012 PE), fluorescein (sc-518012 FITC), Alexa Fluor[®] 488 (sc-518012 AF488), Alexa Fluor[®] 546 (sc-518012 AF546), Alexa Fluor[®] 594 (sc-518012 AF594) or Alexa Fluor[®] 647 (sc-518012 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518012 AF680) or Alexa Fluor[®] 790 (sc-518012 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Lysozyme C (E-5) is recommended for detection of Lysozyme C of human 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), 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 1:30-1:3000).

Suitable for use as control antibody for Lysozyme C siRNA (h): sc-45935, Lysozyme C shRNA Plasmid (h): sc-45935-SH and Lysozyme C shRNA (h) Lentiviral Particles: sc-45935-V.

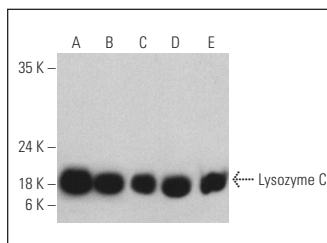
Molecular Weight of Lysozyme C: 17 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, WiDr cell lysate: sc-24779 or U-937 cell lysate: sc-2239.

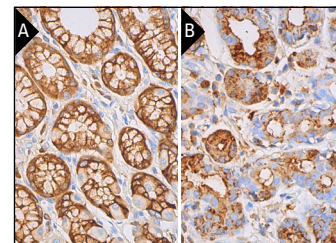
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Lysozyme C (E-5) HRP: sc-518012 HRP. Direct western blot analysis of Lysozyme C expression in HL-60 (A), WiDr (B), HT-29 (C), Hep G2 (D) and U-937 (E) whole cell lysates.



Lysozyme C (E-5): sc-518012. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and membrane staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Liang, S., et al. 2019. Nutrient sensing by the intestinal epithelium orchestrates mucosal antimicrobial defense via translational control of HES1. *Cell Host Microbe* 25: 706-718.e7.
- Good, C., et al. 2019. Type III interferon signaling restricts enterovirus 71 infection of goblet cells. *Sci. Adv.* 5: eaau4255.
- Gaowa, A., et al. 2021. Recombinant soluble thrombomodulin accelerates epithelial stem cell proliferation in mouse intestinal organoids and promotes the mucosal healing in colitis. *J. Gastroenterol. Hepatol.* 36: 3149-3157.

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.

PROTOCOLS

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