SANTA CRUZ BIOTECHNOLOGY, INC.

Lysozyme C (W-20): sc-27956

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 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 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.

SOURCE

Lysozyme C (W-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Lysozyme C of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27956 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

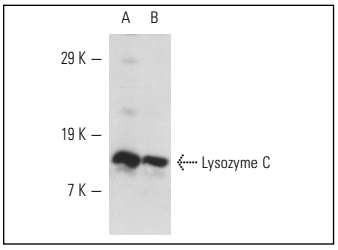
Lysozyme C (W-20) is recommended for detection of a broad range of Lysozyme C family members of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

Lysozyme C (W-20) is also recommended for detection of a broad range of Lysozyme C family members in additional species, including bovine.

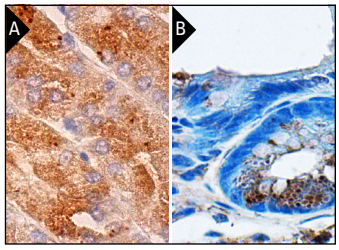
Molecular Weight of Lysozyme C: 16.5 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or THP-1 cell lysate: sc-2238.

DATA



Lysozyme C (W-20): sc-27956. Western blot analysis of Lysozyme C expression in HL-60 (**A**) and THP-1 (**B**) whole cell lysates.



Lysozyme C (W-20): sc-27956. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse intestine tissue showing cytoplasmic staining of glandular cells. Kindly provided by Maria T. Diaz-Meco, PhD., Sanford-Burnham Medical Research Institute (**B**).

SELECT PRODUCT CITATIONS

1. Qu, Y., et al. 2007. Nonclassical IL-1 β secretion stimulated by P2X7 receptors is dependent on inflammasome activation and correlated with exosome release in murine macrophages. J. Immunol. 179: 1913-1925.
2. Fernandez, M.I., et al. 2008. Maturation of paneth cells induces the refractory state of newborn mice to *Shigella* infection. J. Immunol. 180: 4924-4930.
3. Versura, P., et al. 2010. Tear proteomics in evaporative dry eye disease. Eye 24: 1396-1402.
4. Versura, P., et al. 2012. A rapid standardized quantitative microfluidic system approach for evaluating human tear proteins. Mol. Vis. 18: 2526-2537.