

Lysozyme C (C-19): sc-27958

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 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.

REFERENCES

1. Irwin, D.M., et al. 1996. Isolation and characterization of vertebrate lysozyme genes. *EXS* 75: 225-241.
2. Qasba, P.K., et al. 1997. Molecular divergence of lysozymes and α -lactalbumin. *Crit. Rev. Biochem. Mol. Biol.* 32: 255-306.
3. 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* 96: 2678-2681.
4. Peters, C.W., et al. 1989. The human lysozyme gene. Sequence organization and chromosomal localization. *Eur. J. Biochem.* 182: 507-516.
5. Canfield, R.E., et al. 1971. Primary structure of lysozymes from man and goose. *Nat. New Biol.* 232: 16-17.
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.

SOURCE

Lysozyme C (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Lysozyme C of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-27958 P, (100 μ g 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.

APPLICATIONS

Lysozyme C (C-19) 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 μ g per 100-500 μ g 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).

Lysozyme C (C-19) is also recommended for detection of a broad range of Lysozyme C family members in additional species, including equine and bovine.

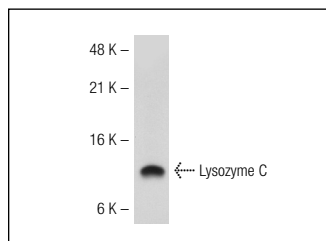
Molecular Weight of Lysozyme C: 17 kDa.

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

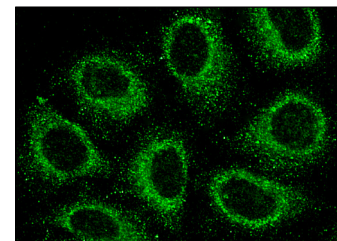
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Lysozyme C (C-19): sc-27958. Western blot analysis of Lysozyme C expression in HL-60 whole cell lysate.



Lysozyme C (C-19): sc-27958. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wu, S., et al. 2013. Probiotic *Lactobacillus rhamnosus* GG mono-association suppresses human rotavirus-induced autophagy in the gnotobiotic piglet intestine. *Gut Pathog.* 5: 22.
2. Ji, Y., et al. 2014. Diet-induced alterations in gut microflora contribute to lethal pulmonary damage in TLR2/TLR4-deficient mice. *Cell Rep.* 8: 137-149.

RESEARCH USE

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