SANTA CRUZ BIOTECHNOLOGY, INC.

LYZL4 (D-12): sc-100030

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. C-type lysozymes are specifically involved catalyzing the hydrolysis of β-1,4 glycosidic bonds of the peptidoglycan of bacterial cell walls. Lysozymes in tissues and body fluids are associated with the monocyte-macrophage system and enhance the activity of immunoagents. As a homolog of human C-type lysozyme, LYZL4 (Lysozyme-like protein 4) is a 146 amino acid secreted protein belonging to the glycosyl hydrolase 22 family. Due to its specific expression in epithelium of human epididymis, most abundantly in the caput, it is assumed that LYZL4 plays a role in the maturation and/or storage of sperm.

REFERENCES

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2. Grobler, J.A., et al. 1994. Sequences of two highly divergent canine type c lysozymes: implications for the evolutionary origins of the lysozyme/α-lactalbumin superfamily. Arch. Biochem. Biophys. 313: 360-366.
3. Prager, E.M., et al. 1996. Animal lysozymes c and g: an overview. EXS 75: 9-31.
4. Irwin, D.M., et al. 1996. Isolation and characterization of vertebrate lysozyme genes. EXS 75: 225-241.
5. Qasba, P.K., et al. 1997. Molecular divergence of lysozymes and α-lactalbumin. Crit. Rev. Biochem. Mol. Biol. 32: 255-306.
6. 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.
7. Liu, F., et al. 2002. Cloning and expression pattern of the lysozyme C gene in zebrafish. Mech. Dev. 113: 69-72.
8. Zhang, K., et al. 2005. Molecular cloning and characterization of three novel lysozyme-like genes, predominantly expressed in the male reproductive system of humans, belonging to the c-type lysozyme/α-lactalbumin family. Biol. Reprod. 73: 1064-1071.
9. Callewaert, L., et al. 2008. A new family of lysozyme inhibitors contributing to lysozyme tolerance in gram-negative bacteria. PLoS Pathog. 4: e1000019.

CHROMOSOMAL LOCATION

Genetic locus: LYZL4 (human) mapping to 3p22.1; Lyzl4 (mouse) mapping to 9 F4.

SOURCE

LYZL4 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LYZL4 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-100030 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LYZL4 (D-12) is recommended for detection of LYZL4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with LYZL2, LYZL1 or LYZL6.

Suitable for use as control antibody for LYZL4 siRNA (h): sc-77966, LYZL4 siRNA (m): sc-149195, LYZL4 shRNA Plasmid (h): sc-77966-SH, LYZL4 shRNA Plasmid (m): sc-149195-SH, LYZL4 shRNA (h) Lentiviral Particles: sc-77966-V and LYZL4 shRNA (m) Lentiviral Particles: sc-149195-V.

Molecular Weight of LYZL4: 16 kDa.

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) 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.

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.