

# LYG2 (Q-17): sc-247911

## 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 are 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. LYG2 (lysozyme G-like 2), also known as LYGH, is 212 amino acid secreted protein that belongs to the glycosyl hydrolase 23 family. LYG2 contains a transglycosylase SLT domain, which catalyzes the cleavage of the  $\beta$ -1,4-glycosidic bond between N-acetylmuramic acid (MurNAc) and N-acetylglucosamine (GlcNAc).

## REFERENCES

- Peters, C.W., Kruse, U., Pollwein, R., Grzeschik, K.H. and Sippel, A.E. 1989. The human lysozyme gene. Sequence organization and chromosomal localization. *Eur. J. Biochem.* 182: 507-516.
- Prager, E.M. and Jollès, P. 1996. Animal lysozymes c and g: an overview. *EXS* 75: 9-31.
- Irwin, D.M., Yu, M. and Wen, Y. 1996. Isolation and characterization of vertebrate lysozyme genes. *EXS* 75: 225-241.
- Patel, S.B., Salen, G., Hidaka, H., Kwiterovich, P.O., Stalenoef, A.F., Miettinen, T.A., Grundy, S.M., Lee, M.H., Rubenstein, J.S., Polymeropoulos, M.H. and Brownstein, M.J. 1998. Mapping a gene involved in regulating dietary cholesterol absorption. The sitosterolemia locus is found at chromosome 2p21. *J. Clin. Invest.* 102: 1041-1044.
- Zumsteg, U., Muller, P.Y. and Miserez, A.R. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
- Shulenin, S., Schriml, L.M., Remaley, A.T., Fojo, S., Brewer, B., Allikmets, R. and Dean, M. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the *Sitosterolemia locus*. *Cytogenet. Cell Genet.* 92: 204-208.
- Hearn, T., Renforth, G.L., Spalluto, C., Hanley, N.A., Piper, K., Brickwood, S., White, C., Connolly, V., Taylor, J.F., Russell-Eggitt, I., Bonneau, D., Walker, M. and Wilson, D.I. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. *Nat. Genet.* 31: 79-83.
- Irwin, D.M. and Gong, Z. 2003. Molecular evolution of vertebrate goose-type lysozyme genes. *J. Mol. Evol.* 56: 234-242.
- Kelsell, D.P., Norgett, E.E., Unsworth, H., Teh, M.T., Cullup, T., Mein, C.A., Dopping-Hepenstal, P.J., Dale, B.A., Tadini, G., Fleckman, P., Stephens, K.G., Sybert, V.P., Mallory, S.B., North, B.V., Witt, D.R., Sprecher, E., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. *Am. J. Hum. Genet.* 76: 794-803.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: LYG2 (human) mapping to 2q11.2.

## SOURCE

LYG2 (Q-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LYG2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-247911 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

LYG2 (Q-17) is recommended for detection of LYG2 of 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 LYG1.

Suitable for use as control antibody for LYG2 siRNA (h): sc-95024, LYG2 shRNA Plasmid (h): sc-95024-SH and LYG2 shRNA (h) Lentiviral Particles: sc-95024-V.

Molecular Weight of LYG2: 23 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.