



LGL (dN-16): sc-27059

BACKGROUND

Drosophila melanogaster, a proven and effective model for studying developmental and cellular processes common to higher eukaryotes, contains a genome encoding approximately 13,600 genes, which were elucidated from more than 120 megabases of euchromatin. These genes are organized among chromosomes 2, 3, 4, X, and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes, which are categorized based on the type of protein for which they encode, represent six major classifications, including intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing, and chromatin associated), and other functional proteins. Morphogenesis and cell differentiation in *Drosophila* requires accurate control of cell division. Discs large (Dlg), Scribble (Scrib), and Lethal giant larvae (LGL) tumour suppressor proteins regulate multiple aspects of neuroblast asymmetric cell division. Dlg/Scrib/LGL proteins show apical cortical enrichment at prophase/metaphase, and have a uniform cortical distribution. LGL appears to work together with Numb to inhibit Notch signaling and to specify the fates of the cellular components of the *Drosophila* adult sensory organ.

REFERENCES

1. Lehner, C.F. 1991. Pulling the string: cell cycle regulation during *Drosophila* development. *Semin. Cell Biol.* 2: 223-31.
2. Adams, M.D., Celniker, S.E., Holt, R.A., Evans, C.A., Gocayne, J.D., Amanatides, P., et al. 2000. The genome sequence of *Drosophila melanogaster*. *Science* 287: 2185-2195.
3. Mata, J., Curado, S., Ephrussi, A. and Rorth, P. 2000. Tribbles coordinates mitosis and morphogenesis in *Drosophila* by regulating string/CDC25 proteolysis. *Cell* 101: 511-22.
4. Albertson, R. and Doe, C.Q. 2003. Dlg, Scrib and LGL regulate neuroblast cell size and mitotic spindle asymmetry. *Nat Cell Biol.* 5: 166-170.
5. Justice, N., Roegiers, F., Jan, L.Y. and Jan, Y.N. 2003. Lethal giant larvae acts together with Numb in Notch inhibition and cell fate specification in the *Drosophila* adult sensory organ precursor lineage. *Curr Biol.* 13: 778-783.
6. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>.
<http://www.sdbonline.org/fly/aimain/6biochem.htm>

SOURCE

LGL (dN-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LGL of *Drosophila melanogaster* 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-27059 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

LGL (dN-16) is recommended for detection of LGL of *Drosophila melanogaster* 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).

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.

PROTOCOLS

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