

toll (dP-19): sc-15694

BACKGROUND

Drosophila melanogaster is a proven and effective model for studying developmental and cellular processes common to higher eukaryotes. Approximately 13,600 genes have been elucidated from more than 120 megabases of euchromatin, and they are organized among the chromosomes 2, 3, 4, X and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes can be categorized based on the type of protein for which they encode and are represented by six major classifications, which include intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing and chromatin associated) or other functional proteins. Many of the genes expressed in *Drosophila* are structurally and functionally similar across species, as are the pathways involved in transducing intracellular signaling. Toll (dToll), whose mammalian homolog is the interleukin-1 (IL-1) receptor, contributes to proper embryonic dorsal-ventral patterning during development and mediates immune response through a toll-cactus-dorsal pathway.

REFERENCES

1. Hashimoto, C., Hudson, K.L. and Anderson, K.V. 1988. The toll gene of *Drosophila*, required for dorsal-ventral embryonic polarity, appears to encode a transmembrane protein. *Cell* 52: 269-279.
2. Halfon, M.S. and Keshishian, H. 1998. The toll pathway is required in the epidermis for muscle development in the *Drosophila* embryo. *Dev. Biol.* 199: 164-174.
3. 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.
4. Anderson, K.V. 2000. Toll signaling pathways in the innate immune response. *Curr. Opin. Immunol.* 12: 13-19.
5. Lopes, E.S. and Araujo, H.M. 2004. The maternal JAK/Stat pathway of *Drosophila* regulates embryonic dorsal-ventral patterning. *Braz. J. Med. Biol. Res.* 37: 1811-1818.
6. Wang, J., Tao, Y., Reim, I., Gajewski, K., Frasch, M. and Schulz, R.A. 2005. Expression, regulation, and requirement of the toll transmembrane protein during dorsal vessel formation in *Drosophila melanogaster*. *Mol. Cell. Biol.* 25: 4200-4210.
7. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>. <http://www.sdbonline.org/fly/torstoll/toll1.htm>
8. LocusLink Report (LocusID: 43222). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

toll (dP-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of toll of origin.

STORAGE

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

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-15694 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

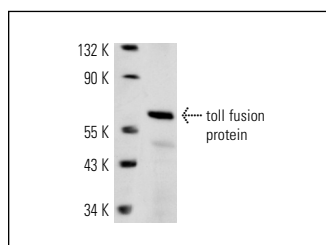
toll (dP-19) is recommended for detection of toll of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of toll: 133 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) 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



toll (dP-19): sc-15694. Western blot analysis of *Drosophila* recombinant toll fusion protein.

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.