

Fat (dC-16): sc-26903

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. Fat, an atypical cadherin, contains a putative signal sequence, 34 tandem cadherin domains, 4 EGF-like repeats, a transmembrane domain, and a novel cytoplasmic domain. Fat controls both cell growth and planar polarity, including mediating the proper orientation of wing hairs and ommatidia in the eye.

REFERENCES

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2. Tepass, U. 1999. Genetic analysis of cadherin function in animal morphogenesis. *Curr. Opin. Cell Biol.* 11: 540-548.
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. Yang, C.H., Axelrod, J.D. and Simon, M.A. 2002. Regulation of frizzled by Fat-like cadherins during planar polarity signaling in the *Drosophila* compound eye. *Cell* 108: 675-688.
5. Fanto, M., Clayton, L., Meredith, J., Hardiman, K., Charroux, B., Kerridge, S. and McNeill, H. 2003. The tumor-suppressor and cell adhesion molecule Fat controls planar polarity via physical interactions with Atrophin, a transcriptional co-repressor. *Development* 130: 763-774.
6. Ma, D., Yang, C.H., McNeill, H., Simon, M.A. and Axelrod, J.D. 2003. Fidelity in planar cell polarity signalling. *Nature* 421: 543-547.

SOURCE

Fat (dC-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Fat 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-26903 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

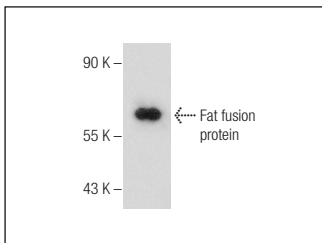
Fat (dC-16) is recommended for detection of Fat of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Fat: 643 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



Fat (dC-16): sc-26903. Western blot analysis of *Drosophila* recombinant Fat fusion protein.

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.