

patched (d-300): sc-33745

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 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. Among these numerous proteins, patched (pat, tuf, tufted, patch, tufted, PTC, Conf, Confused) is a seven transmembrane domain, 1,286 amino acid receptor for hedgehog that mediates proper segment polarity during *Drosophila* development.

REFERENCES

1. Nusslein-Volhard, C. and Wieschaus, E. 1980. Mutations affecting segment number and polarity in *Drosophila*. *Nature* 287: 795-801.
2. Hooper, J.E. and Scott, M.P. 1989. The *Drosophila* patched gene encodes a putative membrane protein required for segmental patterning. *Cell* 59: 751-765.
3. Nakano, Y., Guerrero, I., Hidalgo, A., Taylor, A., Whittle, J.R. and Ingham, P.W. 1989. A protein with several possible membrane-spanning domains encoded by the *Drosophila* segment polarity gene patched. *Nature* 341: 508-513.
4. Adams, M.D., Celniker, S.E., Holt, R.A., Evans, C.A., Gocayne, J.D. and Amanatides, P., et al. 2000. The genome sequence of *Drosophila melanogaster*. *Science* 287: 2185-2195.
5. Johnson, R.L., Rothman, A.L., Xie, J., Goodrich, L.V., Bare, J.W., Bonifas, J.M., Quinn, A.G., Myers, R.M., Cox, D.R., Epstein, E.H., Jr. and Scott, M.P. 1996. Human homolog of patched, a candidate gene for the basal cell nevus syndrome. *Science* 272: 1668-1671.
6. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>.
<http://www.sdbonline.org/fly/segment/patched1.htm>
7. LocusLink Report (LocusID: 35851). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

patched (d-300) is a rabbit polyclonal antibody raised against amino acids 93-392 mapping within an N-terminal extracellular domain of patched 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.

STORAGE

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

APPLICATIONS

patched (d-300) is recommended for detection of patched 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).

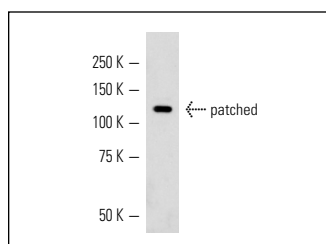
Molecular Weight of patched: 140 kDa.

Positive Controls: *Drosophila* whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



patched (d-300): sc-33745. Western blot analysis of patched expression in *Drosophila* whole cell lysate.

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.


 MONOS
 Satisfaction
 Guaranteed

Try **patched (188G11): sc-23929**, our highly recommended monoclonal alternative to patched (d-300).