

# patched (188G11): sc-23929

## 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. 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.
5. 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.
6. LocusLink Report (LocusID: 35851). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## SOURCE

patched (188G11) is a mouse monoclonal antibody raised against amino acids 1194-1286 of patched protein of *Drosophila* origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

patched (188G11) is available conjugated to agarose (sc-23929 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23929 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23929 PE), fluorescein (sc-23929 FITC), Alexa Fluor<sup>®</sup> 488 (sc-23929 AF488), Alexa Fluor<sup>®</sup> 546 (sc-23929 AF546), Alexa Fluor<sup>®</sup> 594 (sc-23929 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-23929 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-23929 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-23929 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

patched (188G11) is recommended for detection of patched of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

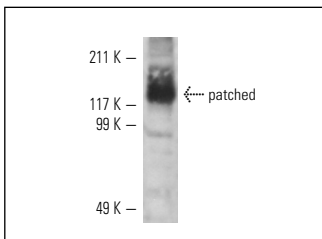
Molecular Weight of patched: 142 kDa.

Positive Controls: Schneider's *Drosophila* Line 2 whole cell lysate: sc-364794.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



patched (188G11): sc-23929. Western blot analysis of Schneider's *Drosophila* line 2 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Sui, X., Sui, Y. and Wang, Y. 2018. LARP7 in papillary thyroid carcinoma induces NIS expression through suppression of the SHH signaling pathway. Mol. Med. Rep. 17: 7521-7528.

## 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](http://www.scbt.com) for detailed protocols and support products.

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