

# dpp (dD-20): sc-21673

## 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. The decapentaplegic (dpp) locus of *Drosophila melanogaster* is a more than 55 kb genetic unit that is required for proper pattern formation during the embryonic and imaginal development of the organism. The *Drosophila* decapentaplegic gene maps to chromosome 2 and encodes a 588 amino acid secreted signaling protein of the TGF $\beta$  class.

## REFERENCES

1. St. Johnston, R.D., Hoffmann, F.M., Blackman, R.K., Segal, D., Grimaila, R., Padgett, R.W., Irick, H.A. and Gelbart, W.M. 1990. Molecular organization of the decapentaplegic gene in *Drosophila melanogaster*. *Genes Dev.* 4: 1114-1127.
2. Manak, J.R., Mathies, L.D. and Scott, M.P. 1994. Regulation of a decapentaplegic midgut enhancer by homeotic proteins. *Development* 120: 3605-3619.
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. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>.  
<http://www.sdbonline.org/fly/aimain/6biochem.htm>.
5. LocusLink Report (LocusID: 33432). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## SOURCE

dpp (dD-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of dpp of *Drosophila melanogaster* origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21673 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

dpp (dD-20) is recommended for detection of dpp 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).

Molecular Weight of dpp: 47 kDa.

Positive Controls: Schneider's *Drosophila* line 2 whole cell lysate.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **dpp (A-10): sc-133182**, our highly recommended monoclonal alternative to dpp (dD-20).