

dpp (A-10): sc-133182

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 an over 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 β 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. and Amana-tides, P. 2000. The genome sequence of *Drosophila melanogaster*. *Science* 287: 2185-2195.
4. The Interactive Fly. <http://sdb.bio.purdue.edu/fly/aimain/1aahome.htm>.
<http://sdb.bio.purdue.edu/fly/aimain/6biochem.htm>.
5. LocusLink Report (LocusID: 33432). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

dpp (A-10) is a mouse monoclonal antibody raised against amino acids 480-588 of dpp of *Drosophila melanogaster* origin.

PRODUCT

Each vial contains 200 μ g IgG $_3$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

dpp (A-10) is recommended for detection of dpp of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

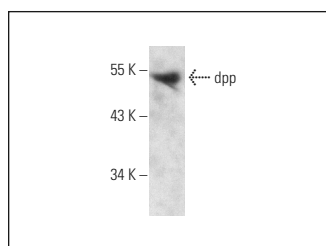
Molecular Weight of dpp: 47 kDa.

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

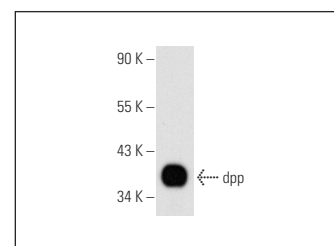
RECOMMENDED SUPPORT REAGENTS

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

DATA



dpp (A-10): sc-133182. Western blot analysis of dpp expression in Schneider's *Drosophila* Line 2 whole cell lysate.



dpp (A-10): sc-133182. Western blot analysis of *Drosophila* recombinant dpp under reducing conditions.

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 for detailed protocols and support products.