



# apterous (dN-20): sc-15675

## 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. Among these numerous proteins, apterous (tornwing, LIM, blt, Xasta) is a homeobox domain-regulated protein that facilitates the formation of boundaries between tissues and is required for development of the wing and haltere imaginal discs.

## REFERENCES

1. Cohen, B., McGuffin, M.E., Pfeifle, C., Segal, D. and Cohen, S.M. 1992. Apterous, a gene required for imaginal disc development in *Drosophila* encodes a member of the LIM family of developmental regulatory proteins. *Genes Dev.* 6: 715-729.
2. Averof, M. and Cohen, S.M. 1997. Evolutionary origin of insect wings from ancestral gills. *Nature* 385: 627-630.
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: 2185-2295.
4. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>. <http://www.sdbonline.org/fly/gene/apterous.htm>
5. LocusLink Report (LocusID: 35509). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## SOURCE

apterous (dN-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of apterous 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-15675 P, (100 µg 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.

## PROTOCOLS

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

## APPLICATIONS

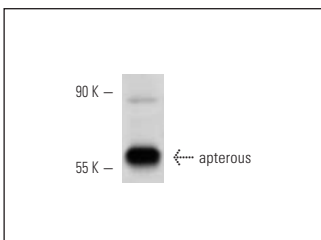
apterous (dN-20) is recommended for detection of apterous of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: Schneider's *Drosophila* line 2.

## 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



apterous (dN-20): sc-15675. Western blot analysis of apterous expression in Schneider's *Drosophila* line 2 whole cell lysate.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.