SANTA CRUZ BIOTECHNOLOGY, INC.

AbdA (C-11): sc-390990

BACKGROUND

Drosophila melanogaster, a proven and effective model for studying developmental and cellular processes common to higher eukaryotes, contains a genome encoding approximately 13,600 genes, which were elucidated from more than 120 megabases of euchromatin. These genes are organized among chromosomes 2, 3, 4, X, and Y, with the Y chromosome being predominately heterochromatic. *Drosophila* genes, which are categorized based on the type of protein for which they encode, represent six major classifications, including intracellular signaling proteins, transmembrane proteins, RNA binding proteins, secreted factors, transcription regulators (basic helix-loop-helix, homeodomain containing, zinc finger containing, and chromatin associated), and other functional proteins. Morphogenesis and cell differentiation in *Drosophila* requires accurate control of cell division. The Hox/homeotic genes encode transcription factors that generate segmental diversity during *Drosophila* development. In *Drosophila,* the ultrabithorax (Ubx) and abdominal A (AbdA, also abd-A) Hox proteins are expressed largely in the abdominal segments, where they suppress thoracic leg development during embryogenesis.

REFERENCES

1. Lehner, C.F. 1991. Pulling the string: cell cycle regulation during *Drosophila* development. Semin. Cell Biol. 2: 223-231.
2. Adams, M.D., et al. 2000. The genome sequence of *Drosophila melanogaster.* Science 287: 2185-2195.
3. Mata, J., et al. 2000. Tribbles coordinates mitosis and morphogenesis in *Drosophila* by regulating string/Cdc25 proteolysis. Cell 101: 511-522.
4. Brodu, V., et al. 2002. Abdominal A specifies one cell type in *Drosophila* by regulating one principal target gene. Development 129: 2957-2963.

SOURCE

AbdA (C-11) is a mouse monoclonal antibody raised against amino acids 261-390 mapping within an internal region of AbdA of *Drosophila melanogaster* origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AbdA (C-11) is available conjugated to agarose (sc-390990 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390990 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390990 PE), fluorescein (sc-390990 FITC), Alexa Fluor® 488 (sc-390990 AF488), Alexa Fluor® 546 (sc-390990 AF546), Alexa Fluor® 594 (sc-390990 AF594) or Alexa Fluor® 647 (sc-390990 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390990 AF680) or Alexa Fluor® 790 (sc-390990 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

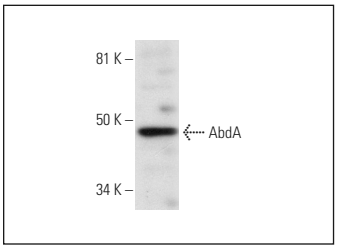
AbdA (C-11) is recommended for detection of AbdA of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 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™ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



AbdA (C-11): sc-390990. Western blot analysis of AbdA expression in Schneider's *Drosophila* Line 2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kyrchanova, O., et al. 2020. The insulator functions of the *Drosophila* polydactyl C_2H_2 zinc finger protein CTCF: necessity versus sufficiency. Sci. Adv. 6: eaaz3152.
2. Allen, A.M., et al. 2020. A single-cell transcriptomic atlas of the adult *Drosophila* ventral nerve cord. Elife 9: e54074.
3. Mitchell, N.P., et al. 2022. Visceral organ morphogenesis via calcium-patterned muscle constrictions. Elife 11: e77355.
4. Sipani, R. and Joshi, R. 2022. Hox genes collaborate with helix-loop-helix factor Grainyhead to promote neuroblast apoptosis along the anterior-posterior axis of the *Drosophila* larval central nervous system. Genetics 222: iyac101.

RESEARCH USE

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