SANTA CRUZ BIOTECHNOLOGY, INC.

Polycomb (d-220): sc-25762

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 proteins, Polycomb (Pc) is a transcription regulator that prevents the interaction of transcriptional components with *cis*-elements by associating with *cis*-polycomb response elements (PREs) and creating novel chromatin structures.

REFERENCES

1. Breiling, A., et al. 1999. The *Drosophila* polycomb protein interacts with nucleosomal core particles *in vitro* via its repression domain. Mol. Cell. Biol. 19: 8451-8460.
2. Dietzel, S., et al. 1999. The nuclear distribution of Polycomb during *Drosophila melanogaster* development shown with a GFP fusion protein. Chromosoma 108: 83-94.
3. Adams, M.D., et al. 2000. The genome sequence of *Drosophila melanogaster*. Science 287: 2185-2195.
4. Poux, S., et al. 2001. Recruitment of components of Polycomb group chromatin complexes in *Drosophila*. Development 128: 75-85.
5. LocusLink Report (LocusID:40358). http://www.ncbi.nlm.nih.gov/LocusLink/

SOURCE

Polycomb (d-220) is a rabbit polyclonal antibody raised against amino acids 171-370 of Polycomb 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.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

Polycomb (d-220) is recommended for detection of Polycomb 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).

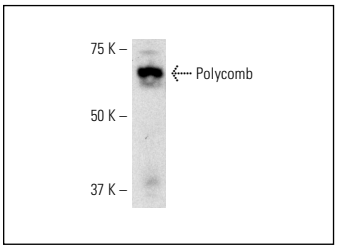
Molecular Weight of Polycomb: 64 kDa

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Polycomb (d-220): sc-25762. Western blot analysis of Polycomb expression in Schneider's *Drosophila* line 2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Pérez-Lluch, S., et al. 2008. Characterization of new regulatory elements within the *Drosophila* bithorax complex. Nucleic Acids Res. 36: 6926-6933.
2. Zhao, Y., et al. 2009. Corepressive action of CBP on androgen receptor transactivation in pericentric heterochromatin in a *Drosophila* experimental model system. Mol. Cell. Biol. 29: 1017-1034.
3. Basu, A. and Atchison, M.L. 2010. CtBP levels control intergenic transcripts, PHO/YY1 DNA binding, and PcG recruitment to DNA. J. Cell. Biochem. 110: 62-69.
4. Wilkinson, F., et al. 2010. PcG recruitment by the YY1 REPO domain can be mediated by Yaf2. J. Cell. Biochem. 109: 478-486.