SANTA CRUZ BIOTECHNOLOGY, INC.

E(z) (dC-18): sc-25904

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In *Drosophila melanogaster*, segment identity is determined by specific expression of homeotic genes (Hox). The Hox expression pattern is first initiated by gap and pair-rule genes and subsequently maintained by genes of the Polycomb-group (Pc-G) and the trithorax-group (trx-G). E(z) (Enhancer of zeste) is a *Drosophila* Polycomb-group transcriptional repressor and one of the founding members of the family of SET-domain-containing proteins. Several SET-domain proteins possess intrinsic histone methyltransferase (HMT) activity. Enhancer of zeste binds directly to another PcG protein, extra sex combs (ESC), and is present along with ESC in a 600 kDa complex in *Drosophila* embryos. In the early embryo E(z) is found in a complex that includes ESC and is recruited to Polycomb response elements.

REFERENCES

1. Lopez, A., Higuet, D., Rosset, R., Deutsch, J. and Peronnet, F. 2001. Corto genetically interacts with Pc-G and trx-G genes and maintains the anterior boundary of Ultrabithorax expression in *Drosophila* larvae. Mol. Genet. Genomics. 266: 572-583.
2. O'Connell, S., Wang, L., Robert, S., Jones, C.A., Saint, R. and Jones, R.S. 2001. Polycomblike PHD fingers mediate conserved interaction with Enhancer of zeste protein. J. Biol. Chem. 276: 43065-43073.
3. Kuzmichev, A., Nishioka, K., Erdjument-Bromage, H., Tempst, P. and Reinberg, D. 2002. Histone methyltransferase activity associated with a human multiprotein complex containing the Enhancer of zeste protein. Genes Dev. 16: 2893-2905.
4. Wang, L., Ding, L., Jones, C.A. and Jones, R.S. 2002. *Drosophila* Enhancer of zeste protein interacts with dSAP18. Gene 285: 119-125.
5. Czermin, B., Melfi, R., McCabe, D., Seitz, V., Imhof, A. and Pirrotta, V. 2002. *Drosophila* Enhancer of zeste/ESC complexes have a Histone H3 methyltransferase activity that marks chromosomal Polycomb sites. Cell 111: 185-196.

SOURCE

E(z) (dC-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of E(z) 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-25904 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.

RESEARCH USE

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

APPLICATIONS

E(z) (dC-18) is recommended for detection of E(z) 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).

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.