Rpd3 (dV-13): sc-30559

BACKGROUND

Eukaryotic systems have evolved an elegant spectrum of signaling cascades and encoded-molecule-based biological responses to ensure homeostasis of the entire system through-out life. *Drosophila* utilizes a variety of signaling molecules that regulate biochemical events at the cellular level, mediating proper response to developmental signals and environmental variables. The histone deacetylase Rpd3 deacetylates lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation plays an important role in transcriptional regulation, cell cycle and developmental events. Histone deacetylases act via the formation of large multiprotein complexes.

REFERENCES

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2. Rogina, B., et al. 2002. Longevity regulation by *Drosophila* Rpd3 deacetylase and caloric restriction. Science 298: 1745.

3. Pile, L.A., et al. 2002. The Sin3/Rpd3 deacetylase complex is essential for G_2 phase cell cycle progression and regulation of SMRTER corepressor levels. Mol. Cell. Biol. 22: 4965-4976.

4. Tie, F., et al. 2003. A 1-megadalton ESC/E(Z) complex from *Drosophila* that contains polycomblike and Rpd3. Mol. Cell. Biol. 23: 3352-3362.

5. Furuyama, T., et al. 2003. Polycomb group proteins ESC and E(Z) are present in multiple distinct complexes that undergo dynamic changes during development. Genesis 35: 114-124.

6. Lewis, P.W., et al. 2004. Identification of a *Drosophila* Myb-E2F2/RBF transcriptional repressor complex. Genes Dev. 18: 2929-2940.

7. Aggarwal, B.D., et al. 2004. Chromatin regulates origin activity in *Drosophila* follicle cells. Nature 430: 372-376.

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SOURCE

Rpd3 (dV-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rpd3 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-30559 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.

APPLICATIONS

Rpd3 (dV-13) is recommended for detection of Rpd3 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 Rpd3: 63 kDa.

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

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
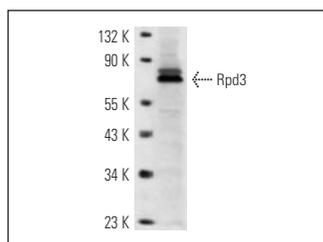
Rpd3 (dV-13): sc-30559. Western blot analysis of Rpd3 expression in Schneider's *Drosophila* whole cell lysate.

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.