



DIAP1 (dN-14): sc-32412

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. The inhibitor of apoptosis DIAP1 targets the processed form of the apical caspase DRONC for degradation through its E3 ubiquitin protein ligase activity. Upon initiation of apoptosis, DIAP1 function is inhibited by the central cell death regulators Reaper and Hid, and DIAP1 is also cleaved by the effector caspase DrICE.

REFERENCES

- Hawkins, C.J., et al. 1999. A cloning method to identify caspases and their regulators in yeast: identification of *Drosophila* IAP1 as an inhibitor of the *Drosophila* caspase DCP-1. Proc. Natl. Acad. Sci. USA 96: 2885-2890.
- Adams, M.D., et al. 2000. The genome sequence of *Drosophila melanogaster*. Science 287: 2185-2195.
- Muro, I., et al. 2002. The *Drosophila* DIAP1 protein is required to prevent accumulation of a continuously generated, processed form of the apical caspase DRONC. J. Biol. Chem. 277: 49644-49650.
- Ditzel, M., et al. 2003. Degradation of DIAP1 by the N-end rule pathway is essential for regulating apoptosis. Nat. Cell. Biol. 5: 467-473.
- Yokokura, T., et al. 2004. Dissection of DIAP1 functional domains via a mutant replacement strategy. J. Biol. Chem. 279: 52603-52612.
- Yin, V.P., et al. 2004. A balance between the DIAP1 death inhibitor and reaper and HID death inducers controls steroid-triggered cell death in *Drosophila*. Proc. Natl. Acad. Sci. USA 101: 8022-8027.
- Yan, N., et al. 2004. Molecular mechanisms of DrICE inhibition by DIAP1 and removal of inhibition by reaper, HID and GRIM. Nat. Struct. Mol. Biol. 11: 420-428.
- Muro, I., et al. 2005. Cleavage of the apoptosis inhibitor DIAP1 by the apical caspase DRONC in both normal and apoptotic *Drosophila* cells. J. Biol. Chem. 280: 18683-18688.
- The Interactive Fly. <http://sdb.bio.purdue.edu/fly/aimain/1aahome.htm>. <http://sdb.bio.purdue.edu/fly/aimain/6biochem.htm>.

SOURCE

DIAP1 (dN-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DIAP1 of *Drosophila melanogaster* origin.

RESEARCH USE

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

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-32412 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DIAP1 (dN-14) is recommended for detection of DIAP1 of *Drosophila melanogaster* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 DIAP1: 57 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.