

Dicer-1 (dC-18): sc-21680

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. RNA interference (RNAi) is the mechanism through which double-stranded RNAs silence cognate genes. Dicer-1 and Dicer-2 are members of the RNase III family of nucleases, which specifically cleave double-stranded RNAs and are implicated in RNAi. The *Drosophila* Dicer-1 gene maps to chromosome 3 and encodes a 2249 amino acid protein. The *Drosophila* Dicer-2 gene maps to chromosome 2 and encodes a 143 amino acid protein.

REFERENCES

- Adams, M.D., Celniker, S.E., Holt, R.A., Evans, C.A., Gocayne, J.D., Amanatides, P., et al. 2000. The genome sequence of *Drosophila melanogaster*. *Science* 287: 2185-295.
- Bernstein, E., Caudy, A.A., Hammond, S.M. and Hannon, G.J. 2001. Role for a bidentate ribonuclease in the initiation step of RNA interference. *Nature* 409: 363-366.
- Banerjee, D. and Slack, F. 2002. Control of developmental timing by small temporal RNAs: a paradigm for RNA-mediated regulation of gene expression. *Bioessays* 24: 119-129.
- The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>. <http://www.sdbonline.org/fly/aimain/6biochem.htm>.
- LocusLink Report (LocusID: 36993). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

Dicer-1 (dC-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Dicer-1 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-21680 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

Dicer-1 (dC-18) is recommended for detection of Dicer-1 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).

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.

SELECT PRODUCT CITATIONS

- Thakur, S., et al. 2010. Inactivation of adenosine A2A receptor attenuates basal and angiotensin II-induced ROS production by Nox2 in endothelial cells. *J. Biol. Chem.* 285: 40104-40113.
- Tickner, J., et al. 2011. Nox2-derived ROS in PPAR γ signaling and cell-cycle progression of lung alveolar epithelial cells. *Free Radic. Biol. Med.* 51: 763-72.

PROTOCOLS

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