



Dumbfounded (dY-17): sc-21605

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. Aggregation and fusion of myoblasts to form myotubes is essential for myogenesis in many organisms. The separation of myoblasts into two classes, with some myoblasts acting as seeds and others being recruited, is central to myogenesis in *Drosophila*. The *Drosophila* Dumbfounded gene maps to chromosome 1 and encodes a 959 amino acid protein, also designated duf, which is a putative cell adhesion protein that causes myoblasts to aggregate on founder cells prior to fusion, thereby forming a myotube.

REFERENCES

1. 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: 2185-2195.
2. Ruiz-Gomez, M., Coutts, N., Price, A., Taylor, M.V., and Bate, M. 2000. *Drosophila* Dumbfounded: a myoblast attractant essential for fusion. *Cell* 102: 189-198.
3. Menon, S.D. and Chia, W. 2001. *Drosophila* rolling pebbles: a multidomain protein required for myoblast fusion that recruits D-Titin in response to the myoblast attractant Dumbfounded. *Dev. Cell* 1: 691-703.
4. Dworak, H.A., Charles, M.A., Pellerano, L.B., and Sink, H. 2001. Characterization of *Drosophila* hibris, a gene related to human nephrin. *Development* 128: 4265-4276.
5. The Interactive Fly. <http://www.sdbonline.org/fly/aimain/1aahome.htm>. <http://www.sdbonline.org/fly/aimain/6biochem.htm>.
6. LocusLink Report (LocusID: 31292). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

Dumbfounded (dY-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Dumbfounded 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-21605 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Dumbfounded (dY-17) is recommended for detection of Dumbfounded 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.

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.