

EXD (dE-20): sc-26190

BACKGROUND

Homeodomain-containing Hox proteins regulate segmental identity in *Drosophila* in concert with two partners known as Extradenticle (EXD) and Homothorax (HTH). EXD and HTH are DNA-binding, homeodomain proteins. Vertebrate orthologs of EXD and HTH, known as Pbx and Meis (named for a myeloid ecotropic leukemia virus integration site), respectively, are encoded by multigene families and are present in multimeric complexes together with vertebrate Homeotic (Hox) proteins. In *Drosophila*, differences between segments, such as the presence or absence of appendages, or the identity of structures along the anterior-posterior axis, are controlled by Hox transcription factors. Co-factor homeodomain proteins such as HTH and EXD can increase the DNA-binding specificity of Hox protein transcription factors. HTH binds to the homeotic co-factor Extradenticle (EXD) and translocates it to the nucleus. The co-expression of EXD and HTH with Distal-less is required to establish antenna fate.

REFERENCES

- Inbal, A., et al. 2001. Genetic evidence for the transcriptional-activating function of Homothorax during adult fly development. *Development* 128: 3405-3413.
- Waskiewicz, A.J., et al. 2001. Zebrafish Meis functions to stabilize Pbx proteins and regulate hindbrain patterning. *Development* 128: 4139-4151.
- Gebelein, B., et al. 2002. Specificity of Distal-less repression and limb primordia development by abdominal Hox proteins. *Dev. Cell* 3: 487-498.
- Dong, P.D., et al. 2002. Distal-less and homo-thorax regulate multiple targets to pattern the *Drosophila* antenna. *Development* 129: 1967-1974.
- Galant, R., et al. 2002. Hox repression of a target gene: extradenticle-independent, additive action through multiple monomer binding sites. *Development* 129: 3115-3126.
- Van Auken, K., et al. 2002. Roles of the Homothorax/Meis/Prep homolog UNC-62 and the Exd/Pbx homologs CEH-20 and CEH-40 in *C. elegans* embryogenesis. *Development* 129: 5255-5268.

SOURCE

EXD (dE-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EXD 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-26190 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

EXD (dE-20) is recommended for detection of EXD 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 EXD: 47 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.

SELECT PRODUCT CITATIONS

- Agelopoulos, M., et al. 2012. Developmental regulation of chromatin conformation by Hox proteins in *Drosophila*. *Cell Rep.* 1: 350-359.

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.