

Dlx-2 (E-7): sc-390468

BACKGROUND

Dlx genes are a highly conserved family of six different (Dlx1-6) homeo box-containing genes that share homology with distal-less (Dll), a gene expressed in the head and limbs of the developing fruit fly. Dlx genes are expressed in spatially and temporally restricted patterns in craniofacial primordia, basal telencephalon and diencephalon, and in distal regions of extending appendages, including the limb and the genital bud. The differential expression of Dlx influences patterning, morphogenesis and histogenesis in these tissues. The Dlx gene products can activate transcription and are localized primarily to the nucleus, although Dlx-5 can be found in the cytoplasm. Dlx proteins influence different stages of proper tissue development, including patterning of the orofacial skeleton (craniofacial ectomesenchyme) and differentiation of structures within and between teeth.

REFERENCES

1. Weiss, K.M., et al. 1995. Dlx and other homeobox genes in the morphological development of the dentition. *Connect. Tissue Res.* 32: 35-40.
2. Davideau, J.L., et al. 1999. Expression of Dlx-5 during human embryonic craniofacial development. *Mech. Dev.* 81: 183-186.
3. Depew, M.J., et al. 1999. Dlx-5 regulates regional development of the branchial arches and sensory capsules. *Development* 126: 3831-3846.
4. Eisenstat, D.D., et al. 1999. Dlx-1, Dlx-2, and Dlx-5 expression define distinct stages of basal forebrain differentiation. *J. Comp. Neurol.* 414: 217-237.
5. Bendall, A.J. and Abate-Shen, C. 2000. Roles for Msx and Dlx homeoproteins in vertebrate development. *Gene* 247: 17-31.
6. Merlo, G.R., et al. 2000. Multiple functions of Dlx genes. *Int. J. Dev. Biol.* 44: 619-626.

CHROMOSOMAL LOCATION

Genetic locus: DLX2 (human) mapping to 2q31.1; Dlx2 (mouse) mapping to 2 C2.

SOURCE

Dlx-2 (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 291-310 near the C-terminus of Dlx-2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390468 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-390468 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Dlx-2 (E-7) is recommended for detection of Dlx-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Dlx-2 siRNA (h): sc-38651, Dlx-2 siRNA (m): sc-38652, Dlx-2 shRNA Plasmid (h): sc-38651-SH, Dlx-2 shRNA Plasmid (m): sc-38652-SH, Dlx-2 shRNA (h) Lentiviral Particles: sc-38651-V and Dlx-2 shRNA (m) Lentiviral Particles: sc-38652-V.

Dlx-2 (E-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Dlx-2: 34 kDa.

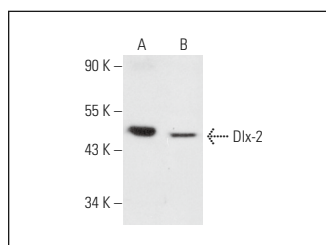
Molecular Weight (observed) of Dlx-2: 45 kDa.

Positive Controls: mouse brain extract: sc-2253 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Dlx-2 (E-7): sc-390468. Western blot analysis of Dlx-2 expression in mouse brain tissue extract (A) and Jurkat whole cell lysate (B).

SELECT PRODUCT CITATIONS

1. Qu, B., et al. 2014. Distal-less homeobox 2 promotes the osteogenic differentiation potential of stem cells from apical papilla. *Cell Tissue Res.* 357: 133-143.

RESEARCH USE

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