

Dlx-3 (B-5): sc-514094

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.

CHROMOSOMAL LOCATION

Genetic locus: DLX3 (human) mapping to 17q21.33; Dlx3 (mouse) mapping to 11 D.

SOURCE

Dlx-3 (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 236-261 near the C-terminus of Dlx-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-514094 X, 200 µg/0.1 ml.

Dlx-3 (B-5) is available conjugated to agarose (sc-514094 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514094 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514094 PE), fluorescein (sc-514094 FITC), Alexa Fluor® 488 (sc-514094 AF488), Alexa Fluor® 546 (sc-514094 AF546), Alexa Fluor® 594 (sc-514094 AF594) or Alexa Fluor® 647 (sc-514094 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514094 AF680) or Alexa Fluor® 790 (sc-514094 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514094 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

Dlx-3 (B-5) is recommended for detection of Dlx-3 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-3 siRNA (h): sc-38653, Dlx-3 siRNA (m): sc-38654, Dlx-3 siRNA (r): sc-156087, Dlx-3 shRNA Plasmid (h): sc-38653-SH, Dlx-3 shRNA Plasmid (m): sc-38654-SH, Dlx-3 shRNA Plasmid (r): sc-156087-SH, Dlx-3 shRNA (h) Lentiviral Particles: sc-38653-V, Dlx-3 shRNA (m) Lentiviral Particles: sc-38654-V and Dlx-3 shRNA (r) Lentiviral Particles: sc-156087-V.

Dlx-3 (B-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

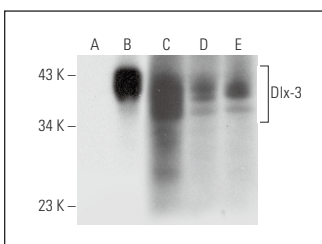
Molecular Weight of Dlx-3: 38-39 kDa.

Positive Controls: Dlx-3 (h): 293T Lysate: sc-113948, JEG-3 whole cell lysate: sc-364255 or MCF7 nuclear extract: sc-2149.

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 A/G PLUS-Agarose: sc-2003 (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-3 (B-5): sc-514094. Western blot analysis of Dlx-3 expression in non-transfected 293T: sc-117752 (A), human Dlx-3 transfected 293T: sc-113948 (B), JEG-3 (C) and MCF7 (D) whole cell lysates and MCF7 nuclear extract (E).

SELECT PRODUCT CITATIONS

1. Moore, S.T., et al. 2023. Generating high-fidelity cochlear organoids from human pluripotent stem cells. *Cell Stem Cell* 30: 950-961.e7.

RESEARCH USE

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