

Dlx-4 (A-20): sc-18146

BACKGROUND

Dlx genes are a highly conserved family of six different (Dlx1–6) homeobox-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. et al. 2000. Roles for Msx and Dlx homeoproteins in vertebrate development. *Gene* 247: 17-31.

CHROMOSOMAL LOCATION

Genetic locus: DLX4 (human) mapping to 17q21.33.

SOURCE

Dlx-4 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Dlx-4 of human 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-18146 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-18146 X, 200 µg/0.1 ml.

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

Dlx-4 (A-20) is recommended for detection of Dlx-4 of human and origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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-4 siRNA (h): sc-38655, Dlx-4 shRNA Plasmid (h): sc-38655-SH and Dlx-4 shRNA (h) Lentiviral Particles: sc-38655-V.

Dlx-4 (A-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of human Dlx-4: 27 kDa.

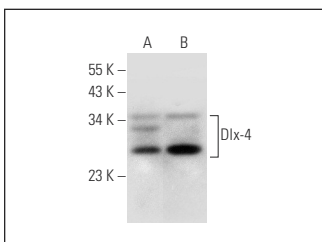
Molecular Weight (observed) of human Dlx-4: 30 kDa.

Positive Controls: SK-OV-3 whole cell lysate: sc-364229, JAR cell lysate: sc-2276 or JEG-3 whole cell lysate.

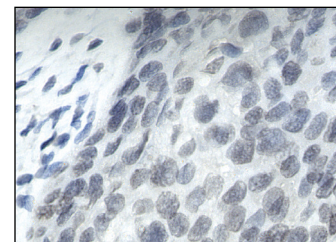
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Dlx-4 (A-20): sc-18146. Western blot analysis of Dlx-4 expression in SK-OV-3 (A) and OVCAR-3 (B) whole cell lysates.



Dlx-4 (A-20): sc-18146. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Hara, F., et al. 2007. A homeobox gene related to *Drosophila* distal-less promotes ovarian tumorigenicity by inducing expression of vascular endothelial growth factor and fibroblast growth factor-2. *Am. J. Pathol.* 170: 1594-1606.