

Dlx-6 (2D7): sc-517058

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

- Weiss, K.M., et al. 1995. Dlx and other homeobox genes in the morphological development of the dentition. *Connect. Tissue Res.* 32: 35-40.
- Davideau, J.L., et al. 1999. Expression of Dlx-5 during human embryonic craniofacial development. *Mech. Dev.* 81: 183-186.
- Depew, M.J., et al. 1999. Dlx-5 regulates regional development of the branchial arches and sensory capsules. *Development* 126: 3831-3846.
- 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.
- Bendall, A.J. and Abate-Shen, C. 2000. Roles for Msx and Dlx homeoproteins in vertebrate development. *Gene* 247: 17-31.
- Merlo, G.R., et al. 2000. Multiple functions of Dlx genes. *Int. J. Dev. Biol.* 44: 619-626.
- LocusLink Report (LocusID: 1746). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: DLX6 (human) mapping to 7q21.3; Dlx6 (mouse) mapping to 6 A1.

SOURCE

Dlx-6 (2D7) is a mouse monoclonal antibody raised against amino acids 71-160 representing partial length Dlx-6 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

Dlx-6 (2D7) is recommended for detection of Dlx-6 of mouse, rat and human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Dlx-6 siRNA (h): sc-38659, Dlx-6 siRNA (m): sc-38660, Dlx-6 shRNA Plasmid (h): sc-38659-SH, Dlx-6 shRNA Plasmid (m): sc-38660-SH, Dlx-6 shRNA (h) Lentiviral Particles: sc-38659-V and Dlx-6 shRNA (m) Lentiviral Particles: sc-38660-V.

Molecular Weight (predicted) of Dlx-6: 20 kDa.

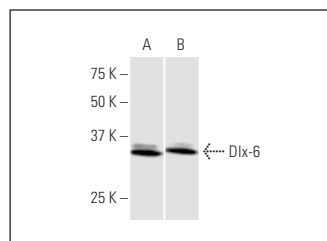
Molecular Weight (observed) of Dlx-6: 35 kDa.

Positive Controls: Dlx-6 transfected 293T whole cell lysate.

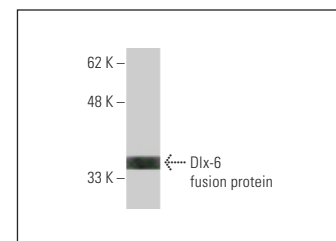
RECOMMENDED SUPPORT REAGENTS

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).

DATA



Dlx-6 (2D7): sc-517058. Western blot analysis of Dlx-6 expression in non-transfected (A) and Dlx-6 transfected (B) 293T whole cell lysates.



Dlx-6 (2D7): sc-517058. Western blot analysis of human recombinant Dlx-6 fusion protein.

SELECT PRODUCT CITATIONS

- Kochat, V., et al. 2021. Enhancer reprogramming in PRC2-deficient malignant peripheral nerve sheath tumors induces a targetable de-differentiated state. *Acta Neuropathol.* 142: 565-590.
- Yu, W., et al. 2023. DANCR promotes glioma cell autophagy and proliferation via the miR-33b/DLX6/ATG7 axis. *Oncol. Rep.* 49: 39.

RESEARCH USE

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