

DBX2 (E-14): sc-138237

BACKGROUND

DBX2 (developing brain homeobox protein 2) is a 339 amino acid member of the H2.0 homeobox family. DBX2, which is localized to the nucleus, contains one homeobox DNA-binding domain, a region of 60 amino acids that binds DNA through a helix-turn-helix type of structure. DBX2, which is expressed in the forebrain, midbrain, hindbrain and spinal cord, has been implicated in CNS development. Specifically, DBX2 has been shown to play a role in spinal cord dorsal/ventral patterning, as well as the regionalization of the CNS. DBX2 is also thought to play a role in the production of multiple spinal cord cell types.

REFERENCES

- Shoji, H., et al. 1996. Regionalized expression of the DBX family homeobox genes in the embryonic CNS of the mouse. *Mech. Dev.* 56: 25-39.
- Aboul-Eid, H.Z., et al. 2006. Evaluation of a nematode bio-product DBX-20% against root-knot nematode *Meloidogyne incognita* affecting grapevine under field conditions. *Commun. Agric. Appl. Biol. Sci.* 71: 659-668.
- Pachikara, A., et al. 2007. Activation of Class I transcription factors by low level Sonic hedgehog signaling is mediated by GLI-2-dependent and independent mechanisms. *Dev. Biol.* 305: 52-62.
- Gribble, S.L., et al. 2007. Regulation and function of DBX genes in the zebrafish spinal cord. *Dev. Dyn.* 236: 3472-3483.
- Kennea, N.L., et al. 2009. Differentiation of human fetal mesenchymal stem cells into cells with an oligodendrocyte phenotype. *Cell Cycle* 8: 1069-1079.
- Wu, C., et al. 2009. ZHX2 Interacts with Ephrin-B and regulates neural progenitor maintenance in the developing cerebral cortex. *J. Neurosci.* 29: 7404-7412.
- Alavian, K.N., et al. 2009. Elevated P75NTR expression causes death of engrailed-deficient midbrain dopaminergic neurons by ERK 1/2 suppression. *Neural Dev.* 4: 11.
- Rhinn, M., et al. 2009. Zebrafish GBX1 refines the midbrain-hindbrain boundary border and mediates the Wnt-8 posteriorization signal. *Neural Dev.* 4: 12.

CHROMOSOMAL LOCATION

Genetic locus: DBX2 (human) mapping to 12q12.

SOURCE

DBX2 (E-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of DBX2 of human origin.

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 or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138237 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-138237 X, 200 µg/0.1 ml.

APPLICATIONS

DBX2 (E-14) is recommended for detection of DBX2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with DBX1.

Suitable for use as control antibody for DBX2 siRNA (h): sc-96112, DBX2 shRNA Plasmid (h): sc-96112-SH and DBX2 shRNA (h) Lentiviral Particles: sc-96112-V.

DBX2 (E-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of DBX2: 37 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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