

TLX2 (T-22): sc-102132

BACKGROUND

T cell leukemia homeobox protein 2 (TLX2), also known as homeobox protein Hox-11L1 (HOX11L1), neural crest homeobox protein (NCX) or ENX, is a 284 amino acid member of the TLX homeobox family. The mouse homolog, Tlx2, has been detected in dorsal-root ganglia, cranial and enteric-nerve ganglia, parasympathetic ganglia and adrenal glands in mouse embryos and in the adrenal glands, intestine and heart of adult mice. The expression pattern of TLX2, which is restricted to tissues derived from neural crest cells, suggests that it may play a role in the proliferation or differentiation of the enteric peripheral nervous system. TLX2, which is localized to the nucleus, is highly homologous to mouse TLX2, and shares several critical domains, including an enhancer element in the promoter that is crucial for tissue-specific expression. Mutations in the gene encoding mouse TLX2 lead to congenital anomalies closely resembling neuronal intestinal dysplasia in humans. Thus, TLX2 is thought to play a role in this disease, which is a rare condition characterized by hyperplasia of submucosal plexus with giant submucosal ganglia and increased acetylcholinesterase activity in nerve fiber around submucosal blood vessels.

REFERENCES

- Dear, T.N., et al. 1993. The HOX11 gene encodes a DNA-binding nuclear transcription factor belonging to a distinct family of homeobox genes. *Proc. Natl. Acad. Sci. USA* 90: 4431-4435.
- Hatano, M., et al. 1997. Ncx, a Hox11 related gene, is expressed in a variety of tissues derived from neural crest cells. *Anat. Embryol.* 195: 419-425.
- Hatano, M., et al. 1997. A novel pathogenesis of megacolon in Ncx/Hox11L1 deficient mice. *J. Clin. Invest.* 100: 795-801.
- Iitsuka, Y., et al. 1999. An enhancer element for expression of the Ncx (Enx, Hox11L1) gene in neural crest-derived cells. *J. Biol. Chem.* 274: 24401-24407.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604240. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Kaifi, J.T., et al. 2006. Allelic loss of Hox11L1 gene locus predicts outcome of gastrointestinal stromal tumors. *Oncol. Rep.* 16: 915-919.
- Borghini, S., et al. 2007. Transcriptional regulation of TLX2 and impaired intestinal innervation: possible role of the PHOX2A and PHOX2B genes. *Eur. J. Hum. Genet.* 15: 848-855.

CHROMOSOMAL LOCATION

Genetic locus: TLX2 (human) mapping to 2p13.1; Tlx2 (mouse) mapping to 6 C3.

SOURCE

TLX2 (T-22) is a purified rabbit polyclonal antibody raised against TLX2 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

TLX2 (T-22) is recommended for detection of TLX2 of mouse, rat, human and canine 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 TLX2 siRNA (h): sc-94612, TLX2 siRNA (m): sc-154299, TLX2 shRNA Plasmid (h): sc-94612-SH, TLX2 shRNA Plasmid (m): sc-154299-SH, TLX2 shRNA (h) Lentiviral Particles: sc-94612-V and TLX2 shRNA (m) Lentiviral Particles: sc-154299-V.

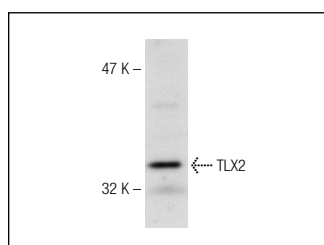
Molecular Weight of TLX2: 30 kDa.

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

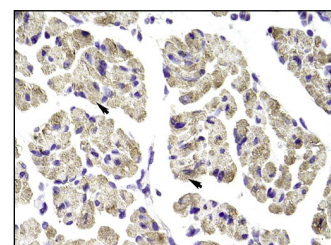
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



TLX2 (T-22): sc-102132. Western blot analysis of TLX2 expression in Hep G2 whole cell lysate.



TLX2 (T-22): sc-102132. Immuno-peroxidase staining of formalin fixed, paraffin-embedded human muscle tissue showing cytoplasmic staining.

STORAGE

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