

## TLX2 (N-13): sc-132471

### 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

1. 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.
2. 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.
3. Hatano, M., et al. 1997. A novel pathogenesis of megacolon in Ncx/Hox11L1 deficient mice. *J. Clin. Invest.* 100: 795-801.
4. 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.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604240. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

### CHROMOSOMAL LOCATION

Genetic locus: TLX2 (human) mapping to 2p13.1.

### SOURCE

TLX2 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TLX2 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-132471 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-132471 X, 200 µg/0.1 ml.

### APPLICATIONS

TLX2 (N-13) is recommended for detection of TLX2 of 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)], 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); non cross-reactive with TLX3.

Suitable for use as control antibody for TLX2 siRNA (h): sc-94612, TLX2 shRNA Plasmid (h): sc-94612-SH and TLX2 shRNA (h) Lentiviral Particles: sc-94612-V.

TLX2 (N-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

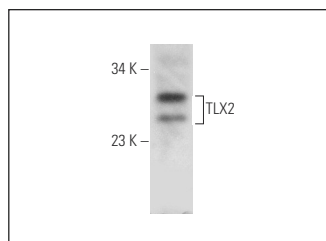
Molecular Weight of TLX2: 30 kDa.

Positive Controls: human muscle tissue, Jurkat nuclear extract: sc-2132 or Hep G2 cell lysate: sc-2227.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

### DATA



TLX2 (N-13): sc-132471. Western blot analysis of TLX2 expression in Jurkat nuclear extract.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.