SANTA CRUZ BIOTECHNOLOGY, INC.

TLX3 (A-17): sc-23397

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the TLX homeobox gene family are expressed in the developing hindbrain; specifically, the TLX3 gene is expressed in the developing dorsal and ventral medulla oblongata. The TLX3 gene is required for formation of first-order relay visceral sensory neurons in the brainstem. Development of most nor-adrenergic centers is compromised in both TLX3- and Phox2b-deficient mice. The TLX3 and Phox2 proteins have independent functions in specifying the nor-adrenergic phenotype. TLX3-deficient newborn mice have a high rate of respiration, a decreased duration of inspiration and frequent apnea; they die shortly after birth from central respiratory failure. In both chick and mouse embryos, TLX3 expression occurs in two longitudinal stripes of postmitotic neurons in the developing hindbrain and spinal cord. Implicated in T-ALL (T cell acute lymphoblastic leukemia), the t(5:14)(q35;q32) translocation increases transcription of the TLX3 gene.

REFERENCES

1. Shirasawa, S., et al. 2000. Rnx deficiency results in congenital central hypoventilation. Nat. Genet. 24: 287-290.
2. Bernard, O.A., et al. 2001. A new recurrent and specific cryptic translocation, t(5;14)(q35;q32), is associated with expression of the Hox11L2 gene in T acute lymphoblastic leukemia. Leukemia 15: 1495-1504.
3. Cinti, R., et al. 2001. Assignment of the HOX11L2 gene to human chromosome band 5q35.1 and of its murine homolog to mouse chromosome bands 11A4-A5 by *in situ* hybridization. Cytogenet. Cell Genet. 92: 354-355.
4. Lee-Kirsch, M.A., et al. 2001. Assignment of the human homeobox 11-like 2 gene (HOX11L2) to chromosome 5q34→q35 by radiation hybrid mapping. Cytogenet. Cell Genet. 92: 358.
5. Qia, N.Y., et al. 2001. Formation of brainstem (nor)adrenergic centers and first-order relay visceral sensory neurons is dependent on homeodomain protein Rnx/Tlx3. Genes Dev. 15: 2533-2545.

CHROMOSOMAL LOCATION

Genetic locus: TLX3 (human) mapping to 5q35.1; Tlx3 (mouse) mapping to 11 A4.

SOURCE

TLX3 (A-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TLX3 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-23397 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-23397 X, 200 µg/0.1 ml.

APPLICATIONS

TLX3 (A-17) is recommended for detection of TLX3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TLX3 (A-17) is also recommended for detection of TLX3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TLX3 siRNA (h): sc-38804, TLX3 siRNA (m): sc-38805, TLX3 shRNA Plasmid (h): sc-38804-SH, TLX3 shRNA Plasmid (m): sc-38805-SH, TLX3 shRNA (h) Lentiviral Particles: sc-38804-V and TLX3 shRNA (m) Lentiviral Particles: sc-38805-V.

TLX3 (A-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TLX3: 32 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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) 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.

SELECT PRODUCT CITATIONS

1. Regadas, I., et al. 2014. Dual role of Tlx3 as modulator of Prrxl1 transcription and phosphorylation. Biochim. Biophys. Acta 1839: 1121-1131.

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 or our catalog for detailed protocols and support products.