

TLX3 (34-L): sc-81990

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 (34-L) is a mouse monoclonal antibody raised against recombinant TLX3 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of 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.

RESEARCH USE

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

APPLICATIONS

TLX3 (34-L) 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), 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 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.

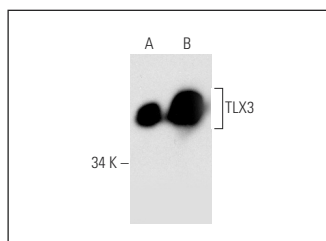
Molecular Weight of TLX3: 32 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or TLX3 (h): 293 Lysate: sc-173065.

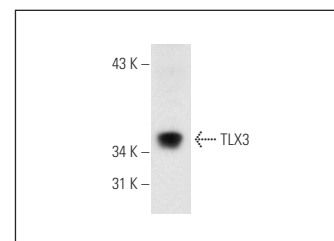
RECOMMENDED SUPPORT REAGENTS

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



TLX3 (34-L): sc-81990. Western blot analysis of TLX3 expression in non-transfected: sc-110760 (A) and human TLX3 transfected: sc-173065 (B) 293 whole cell lysates.



TLX3 (34-L): sc-81990. Western blot analysis of TLX3 expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Robles-Valero, J., et al. 2017. A paradoxical tumor-suppressor role for the rac1 exchange factor Vav1 in T cell acute lymphoblastic leukemia. *Cancer Cell* 32: 608-623.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.