

TLX3 (G-8): sc-514691

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 post-mitotic neurons in the developing hindbrain and spinal cord. The human TLX3 gene maps to chromosome 5q35.1. Implicated in T-ALL (T-cell acute lymphoblastic leukemia), the t(5:14)(q35;q32) translocation increases transcription of the TLX3 gene.

REFERENCES

- Shirasawa, S., et al. 2000. Rnx deficiency results in congenital central hypoventilation. *Nat. Genet.* 24: 287-290.
- 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.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

TLX3 (G-8) is a mouse monoclonal antibody raised against amino acids 31-85 mapping near the N-terminus of TLX3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514691 X, 200 µg/0.1 ml.

TLX3 (G-8) is available conjugated to agarose (sc-514691 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514691 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514691 PE), fluorescein (sc-514691 FITC), Alexa Fluor[®] 488 (sc-514691 AF488), Alexa Fluor[®] 546 (sc-514691 AF546), Alexa Fluor[®] 594 (sc-514691 AF594) or Alexa Fluor[®] 647 (sc-514691 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514691 AF680) or Alexa Fluor[®] 790 (sc-514691 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

TLX3 (G-8) is recommended for detection of TLX3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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 (G-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

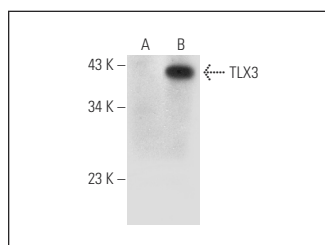
Molecular Weight of TLX3: 32 kDa.

Positive Controls: TLX3 (h): 293T Lysate: sc-173191.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



TLX3 (G-8): sc-514691. Western blot analysis of TLX3 expression in non-transfected: sc-117752 (A) and human TLX3 transfected: sc-173191 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, J.L., et al. 2021. Spinophilin modulates pain through suppressing dendritic spine morphogenesis via negative control of Rac1-ERK signaling in rat spinal dorsal horn. *Neurobiol. Dis.* 152: 105302.

STORAGE

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