SANTA CRUZ BIOTECHNOLOGY, INC.

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 postmitotic 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

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.

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 IgG_1 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.

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.

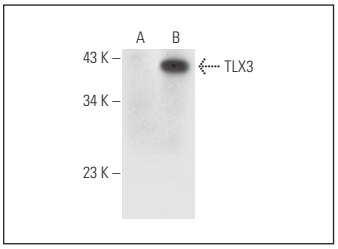
Molecular Weight of TLX3: 32 kDa.

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

1. 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.