

TBX18 (CD-21): sc-130428

BACKGROUND

The T-box (TBX) motif is present in a family of genes whose structural features and expression patterns support their involvement in developmental gene regulation. The TBX gene family are largely conserved throughout metazoan evolution, and these genes code for putative transcription factors that share a uniquely defining DNA-binding domain. TBX genes are a family of developmental regulators with more than 20 members recently identified in invertebrates and vertebrates. Mutations in TBX genes are associated with the onset of several human diseases. Our understanding of functional mechanisms of TBX products has come mainly from the prototypical T/Brachyury, which is a transcription activator. The TBX genes constitute a family of transcriptional regulatory genes that are implicated in a variety of developmental processes ranging from the formation of germ layers to the organizational patterning of the central nervous system.

REFERENCES

1. Law, D.J., Gebuhr, T., Garvey, N., Agulnik, S.I. and Silver, L.M. 1995. Identification, characterization, and localization to chromosome 17q21-22 of the human TBX2 homolog, member of a conserved developmental gene family. *Mamm. Genome* 6: 793-797.
2. Agulnik, S.I., Papaioannou, V.E. and Silver, L.M. 1998. Cloning, mapping, and expression analysis of TBX15, a new member of the T-box gene family. *Genomics* 51: 68-75.
3. Dheen, T., Sleptsova-Friedrich, I., Xu, Y., Clark, M., Lehrach, H., Gong, Z. and Korzh, V. 1999. Zebrafish TBX-C functions during formation of midline structures. *Development* 126: 2703-2713.
4. He, M.I., Wen, L., Campbell, C.E., Wu, J.Y. and Rao, Y. 1999. Transcription repression by *Xenopus* ET and its human ortholog TBX3, a gene involved in ulnar-mammary syndrome. *Proc. Natl. Acad. Sci. USA* 96: 10212-10217.
5. Begemann, G. and Ingham, P.W. 2000. Developmental regulation of TBX5 in zebrafish embryogenesis. *Mech. Dev.* 90: 299-304.
6. Ahn, D.G., Ruvinsky, I., Oates, A.C., Silver, L.M. and Ho, R.K. 2000. TBX20, a new vertebrate T-box gene expressed in the cranial motor neurons and developing cardiovascular structures in zebrafish. *Mech. Dev.* 95: 253-258.

CHROMOSOMAL LOCATION

Genetic locus: TBX18 (human) mapping to 6q14.3; Tbx18 (mouse) mapping to 9 E3.1.

SOURCE

TBX18 (CD-21) is a mouse monoclonal antibody raised against recombinant TBX18 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

TBX18 (CD-21) is recommended for detection of TBX18 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for TBX18 siRNA (h): sc-38479, TBX18 siRNA (m): sc-38480, TBX18 shRNA Plasmid (h): sc-38479-SH, TBX18 shRNA Plasmid (m): sc-38480-SH, TBX18 shRNA (h) Lentiviral Particles: sc-38479-V and TBX18 shRNA (m) Lentiviral Particles: sc-38480-V.

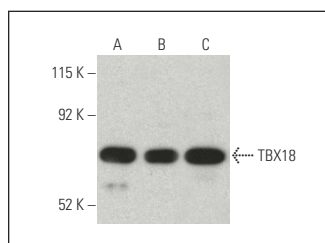
Molecular Weight of TBX18: 65 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or Jurkat whole cell lysate: sc-2204.

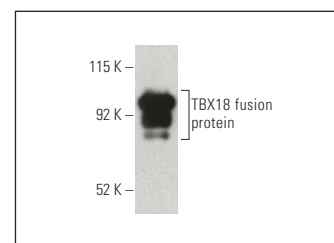
RECOMMENDED SUPPORT REAGENTS

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



TBX18 (CD-21): sc-130428. Western blot analysis of TBX18 expression in Jurkat (A) and HeLa (B) nuclear extracts and Jurkat whole cell lysate (C).



TBX18 (CD-21): sc-130428. Western blot analysis of full length human recombinant TBX18 fusion protein.

SELECT PRODUCT CITATIONS

1. Bugg, D., Bailey, L.R.J., Bretherton, R.C., Beach, K.E., Reichardt, I.M., Robeson, K.Z., Reese, A.C., Gunaje, J., Flint, G., DeForest, C.A., Stempien-Otero, A. and Davis, J. 2022. MBNL1 drives dynamic transitions between fibroblasts and myofibroblasts in cardiac wound healing. *Cell Stem Cell* 29: 419-433.e10.

STORAGE

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

PROTOCOLS

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