SANTA CRUZ BIOTECHNOLOGY, INC.

TBX18 (C-20): sc-17869

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The Power to Question

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., et al. 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., et al. 1998. Cloning, mapping, and expression analysis of TBX15, a new member of the T-box gene family. Genomics 51: 68-75.
3. Dheen, T., et al. 1999. Zebrafish TBX-C functions during formation of midline structures. Development 126: 2703-2713.
4. He, M.I., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

TBX18 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TBX18 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-17869 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-17869 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TBX18 (C-20) 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), 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).

TBX18 (C-20) is also recommended for detection of TBX18 in additional species, including equine, canine, bovine, porcine and avian.

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.

TBX18 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TBX18: 65 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

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. Kapoor, N., et al. 2011. Transcriptional suppression of connexin43 by TBX18 undermines cell-cell electrical coupling in postnatal cardiomyocytes. J. Biol. Chem. 286: 14073-14079.
2. Kocabas, F., et al. 2012. The hypoxic epicardial and subepicardial microenvironment. J. Cardiovasc. Transl. Res. 5: 654-665.
3. Takeichi, M., et al. 2013. The transcription factors Tbx18 and Wt1 control the epicardial epithelial-mesenchymal transition through bi-directional regulation of Slug in murine primary epicardial cells. PLoS ONE 8: e57829.

RESEARCH USE

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