# SANTA CRUZ BIOTECHNOLOGY, INC.

# TBX15 (M-17): sc-17893



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. TBX15, (T-box transcription factor TBX15), also designated TBX14, is a 602 amino acid protein. Mutations in the TBX15 gene are associated with Cousin syndrome a disorder characterized by short stature, craniofacial dysmorphism and hypoplasia of scapula and pelvis.

## REFERENCES

- 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.
- 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.
- 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.
- He, M., 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.
- Begemann, G. and Ingham, P.W. 2000. Developmental regulation of Tbx5 in zebrafish embryogenesis. Mech. Dev. 90: 299-304.
- 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.
- Lausch, E., Hermanns, P., Farin, H.F., Alanay, Y., Unger, S., Nikkel, S., Steinwender, C., Scherer, G., Spranger, J., Zabel, B., Kispert, A. and Superti-Furga, A. 2008. TBX15 mutations cause craniofacial dysmorphism, hypoplasia of scapula and pelvis, and short stature in Cousin syndrome. Am. J. Hum. Genet. 83: 649-655.

#### CHROMOSOMAL LOCATION

Genetic locus: TBX15 (human) mapping to 1p12; Tbx15 (mouse) mapping to 3 F2.2.

# SOURCE

TBX15 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TBX15 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17893 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-17893 X, 200  $\mu g/0.1$  ml.

## **APPLICATIONS**

TBX15 (M-17) is recommended for detection of TBX15 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).

TBX15 (M-17) is also recommended for detection of TBX15 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TBX15 siRNA (h): sc-38477, TBX15 siRNA (m): sc-38478, TBX15 shRNA Plasmid (h): sc-38477-SH, TBX15 shRNA Plasmid (m): sc-38478-SH, TBX15 shRNA (h) Lentiviral Particles: sc-38477-V and TBX15 shRNA (m) Lentiviral Particles: sc-38478-V.

TBX15 (M-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TBX15 isoforms: 66/55 kDa.

#### **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) Immunofluo-rescence: 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.

#### **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.

#### PROTOCOLS

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