

TBX1 (M-20): sc-17877

BACKGROUND

Members of the T-box (Tbx) gene family share a conserved domain that codes for the T-box, a sequence involved in DNA-binding and protein dimerization. The Tbx gene family is largely conserved throughout metazoan evolution, and is implicated in a variety of developmental processes ranging from the formation of germ layers to the organizational patterning of the central nervous system. Both Tbx1 and retinoic acid (RA) are key players in embryonic pharyngeal development. The human genes TBX1 and TBX5 are mutated in cardiac congenital anomaly syndromes. In addition, TBX1 is the major candidate gene for del22q11.2 (DiGeorge or velo-cardio-facial) syndrome, characterized by cranio-facial defects, thymic hypoplasia, cardiovascular anomalies, velopharyngeal insufficiency and skeletal muscle hypotonia.

REFERENCES

1. 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.
2. He, M.L., 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.
3. Begemann, G. and Ingham, P.W. 2000. Developmental regulation of Tbx5 in zebrafish embryogenesis. *Mech. Dev.* 90: 299-304.
4. Ahn, D.G., et al. 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.
5. Minguillon, C., et al. 2003. The comparative genomics of T-box genes. *Brief. Funct. Genomic. Proteomic.* 2: 224-233.
6. Kelly, R.G., et al. 2004. The del22q11.2 candidate gene Tbx1 regulates branchiomeric myogenesis. *Hum. Mol. Genet.* 13: 2829-2840.
7. Stennard, F.A., et al. 2005. T-box transcription factors and their roles in regulatory hierarchies in the developing heart. *Development* 132: 4897-4910.
8. Baldini, A., et al. 2005. Dissecting contiguous gene defects: TBX1. *Curr. Opin. Genet. Dev.* 15: 279-284.
9. Roberts, C., et al. 2005. Retinoic acid down-regulates Tbx1 expression *in vivo* and *in vitro*. *Dev. Dyn.* 232: 928-938.

CHROMOSOMAL LOCATION

Genetic locus: Tbx1 (mouse) mapping to 16 A3.

SOURCE

TBX1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TBX1 of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17877 P, (100 µg 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-17877 X, 200 µg/0.1 ml.

APPLICATIONS

TBX1 (M-20) is recommended for detection of TBX1 of mouse and rat 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).

TBX1 (M-20) is also recommended for detection of TBX1 in additional species, including canine.

Suitable for use as control antibody for TBX1 siRNA (m): sc-38468, TBX1 shRNA Plasmid (m): sc-38468-SH and TBX1 shRNA (m) Lentiviral Particles: sc-38468-V.

TBX1 (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.

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.