SANTA CRUZ BIOTECHNOLOGY, INC.

TBX6 (1D11): sc-517027

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. In the mouse, TBX6 is involved in both the specification and patterning of the somites along the entire length of the embryo. Specifically, TBX6 is expressed in the primitive streak, tail bud and presomitic mesoderm, and is essential for the specification of posterior paraxial mesoderm. In the absence of TBX6, posterior somites are replaced by ectopic neural tubes.

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.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.
3. Begemann, G., et al. 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. Chapman, D.L., et al. 2003. Critical role for Tbx6 in mesoderm specification in the mouse embryo. Mech. Dev. 120: 837-847.
6. White, P.H., et al. 2005. Regulation of Tbx6 expression by Notch signaling. Genesis 42: 61-70.
7. White, P.H., et al. 2005. Dll1 is a downstream target of Tbx6 in the paraxial mesoderm. Genesis 42: 193-202.

CHROMOSOMAL LOCATION

Genetic locus: TBX6 (human) mapping to 16p11.2.

SOURCE

TBX6 (1D11) is a mouse monoclonal antibody raised against amino acids 191-299 representing partial length TBX6 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.

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.

APPLICATIONS

TBX6 (1D11) is recommended for detection of TBX6 of human origin by Western Blotting (starting dilution 1:200, 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 TBX6 siRNA (h): sc-106773, TBX6 shRNA Plasmid (h): sc-106773-SH and TBX6 shRNA (h) Lentiviral Particles: sc-106773-V.

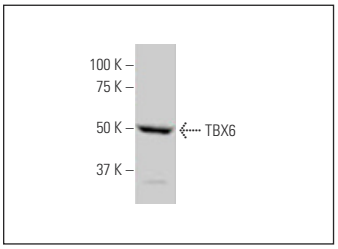
Molecular Weight of TBX6: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

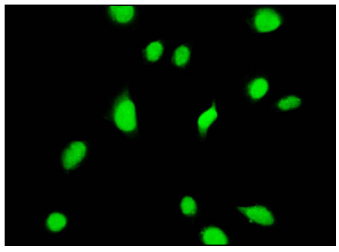
RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto A Blocking Reagent: sc-2333 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



TBX6 (1D11): sc-517027. Western blot analysis of TBX6 expression in HeLa whole cell lysate.



TBX6 (1D11): sc-517027. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Begentas, O.C., et al. 2023. Generation and characterization of human induced pluripotent stem cell line METUi002-A from a patient with primary familial brain calcification (PFBC) carrying a heterozygous mutation (c.687dupT (p.Val230CysfsTer28)) in the SLC20A2 gene. Stem Cell Res. 72: 103226.

RESEARCH USE

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