

TBX3 (S-17): sc-31657

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 mid-line 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.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: TBX3 (human) mapping to 12q24.21; Tbx3 (mouse) mapping to 5 F.

SOURCE

TBX3 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TBX3 of mouse origin.

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-31657 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-31657 X, 200 µg/0.1 ml.

APPLICATIONS

TBX3 (S-17) is recommended for detection of TBX3 of mouse, rat and 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).

TBX3 (S-17) is also recommended for detection of TBX3 in additional species, including equine, canine and porcine.

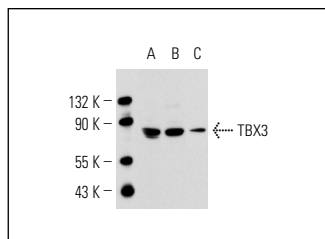
Suitable for use as control antibody for TBX3 siRNA (h): sc-37018, TBX3 siRNA (m): sc-37019, TBX3 shRNA Plasmid (h): sc-37018-SH, TBX3 shRNA Plasmid (m): sc-37019-SH, TBX3 shRNA (h) Lentiviral Particles: sc-37018-V and TBX3 shRNA (m) Lentiviral Particles: sc-37019-V.

TBX3 (S-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

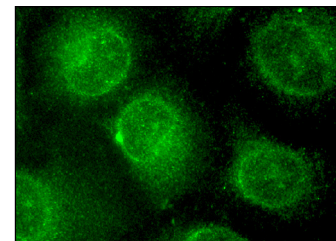
Molecular Weight of TBX3: 80 kDa.

Positive Controls: PC-3 nuclear extract: sc-2152, MCF7 nuclear extract: sc-2149 or rat placenta extract: sc-364808.

DATA



TBX3 (S-17): sc-31657. Western blot analysis of TBX3 expression in PC-3 (A) and MCF7 (B) nuclear extracts and rat placenta tissue extract (C).



TBX3 (S-17): sc-31657. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Han, J., et al. 2010. Tbx3 improves the germ-line competency of induced pluripotent stem cells. *Nature* 463: 1096-1100.

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.



Try **TBX3 (A-6): sc-166623**, our highly recommended monoclonal alternative to TBX3 (S-17).