

TBX5 (C-20): sc-17866

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. Embryonic expression of TBX5 has been found in the human retina. TBX5 as well as TBX20 are required for and have non-redundant functions in early heart development. The genes encoding human TBX5 and TBX1 are mutated in cardiac congenital anomaly syndromes. Specifically, mutations in the TBX5 gene have been identified in patients with Holt-Oram syndrome, an autosomal dominant heart-hand syndrome characterized by congenital heart disease and upper limb deformity.

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: TBX5 (human) mapping to 12q24.21; Tbx5 (mouse) mapping to 5 F.

SOURCE

TBX5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TBX5 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17866 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

TBX5 (C-20) is recommended for detection of TBX5 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).

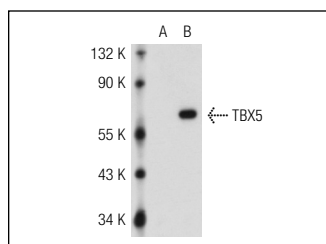
TBX5 (C-20) is also recommended for detection of TBX5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TBX5 siRNA (h): sc-37020, TBX5 siRNA (m): sc-37021, TBX5 shRNA Plasmid (h): sc-37020-SH, TBX5 shRNA Plasmid (m): sc-37021-SH, TBX5 shRNA (h) Lentiviral Particles: sc-37020-V and TBX5 shRNA (m) Lentiviral Particles: sc-37021-V.

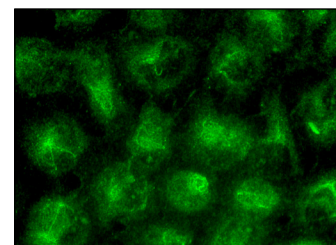
Molecular Weight of TBX5: 57 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or TBX5 (h): 293T Lysate: sc-114054.

DATA



TBX5 (C-20): sc-17866. Western blot analysis of TBX5 expression in non-transfected: sc-117752 (A) and human TBX5 transfected: sc-114054 (B) 293T whole cell lysates.



TBX5 (C-20): sc-17866. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. van den Boogaard, M., et al. 2012. Genetic variation in T-box binding element functionally affects SCN5A/SCN10A enhancer. *J. Clin. Invest.* 122: 2519-2530.

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.



Try **TBX5 (A-6): sc-515536** or **TBX5 (A-4): sc-376952**, our highly recommended monoclonal alternatives to TBX5 (C-20).