SANTA CRUZ BIOTECHNOLOGY, INC.

# TBX5 (A-6): sc-515536

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. 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. 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.


## CHROMOSOMAL LOCATION

Genetic locus: TBX5 (human) mapping to 12q24.21.

## SOURCE

TBX5 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 269-292 within an internal region of TBX5 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515536 X, 200 µg/0.1 ml.

TBX5 (A-6) is available conjugated to agarose (sc-515536 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515536 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515536 PE), fluorescein (sc-515536 FITC), Alexa Fluor® 488 (sc-515536 AF488), Alexa Fluor® 546 (sc-515536 AF546), Alexa Fluor® 594 (sc-515536 AF594) or Alexa Fluor® 647 (sc-515536 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515536 AF680) or Alexa Fluor® 790 (sc-515536 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515536 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).



## STORAGE

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

## APPLICATIONS

TBX5 (A-6) is recommended for detection of TBX5 of human origin by Western Blotting (starting dilution 1:100, 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).

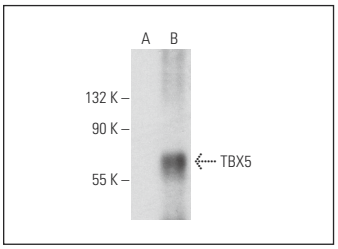
Suitable for use as control antibody for TBX5 siRNA (h): sc-37020, TBX5 shRNA Plasmid (h): sc-37020-SH and TBX5 shRNA (h) Lentiviral Particles: sc-37020-V.

TBX5 (A-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

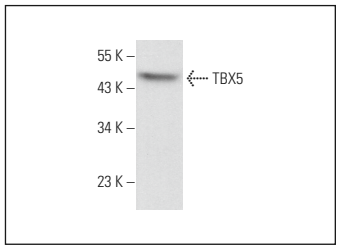
Molecular Weight of TBX5: 57 kDa.

Positive Controls: TBX5 (h): 293T Lysate: sc-114054 or SJRH30 cell lysate: sc-2287.

## DATA




TBX5 (A-6): sc-515536. Western blot analysis of TBX5 expression in non-transfected: sc-117752 (**A**) and human TBX5 transfected: sc-114054 (**B**) 293T whole cell lysates.




TBX5 (A-6): sc-515536. Western blot analysis of TBX5 expression in SJRH30 whole cell lysate.

## SELECT PRODUCT CITATIONS


1. Fiore, L., et al. 2020. Optic vesicle morphogenesis requires primary cilia. Dev. Biol. 462: 119-128.
2. Gonzalez-Teran, B., et al. 2022. Transcription factor protein interactomes reveal genetic determinants in heart disease. Cell 185: 794-814.e30.
3. Shen, J., et al. 2023. Identification of the deubiquitinase USP28 as a novel molecular therapeutic target of ovarian cancer. Biochem. Biophys. Res. Commun. 638: 184-191.
4. He, Z., et al. 2023. Generation of a human embryonic stem cell line (SKLRMe004-A) carrying NKX2.5-EGFP and TBX5-Tdtomato dual fluorescent reporters. Stem Cell Res. 67: 103015.


## RESEARCH USE

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

## PROTOCOLS

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