

# TSHZ3 (N-16): sc-79171



The Power to Question

## BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. TSHZ3 (teashirt zinc finger homeobox 3), also known as KIAA1474, TSH3 or ZNF537, is a 1,081 amino acid protein that contains one homeobox DNA-binding domain and 5 C<sub>2</sub>H<sub>2</sub>-type zinc fingers. Localized to the nucleus, TSHZ3 functions as a transcriptional regulator that is involved in developmental processes throughout the body. The gene encoding TSHZ3 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

## REFERENCES

1. Brandenberger, R., et al. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. *Nat. Biotechnol.* 22: 707-716.
2. Caubit, X., et al. 2005. Expression patterns of the three teashirt-related genes define specific boundaries in the developing and postnatal mouse forebrain. *J. Comp. Neurol.* 486: 76-88.
3. Olsen, J.V., et al. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. *Cell* 127: 635-648.
4. Manfroid, I., et al. 2006. Teashirt 3 expression in the chick embryo reveals a remarkable association with tendon development. *Gene Expr. Patterns* 6: 908-912.
5. Caubit, X., et al. 2008. Teashirt 3 is necessary for ureteral smooth muscle differentiation downstream of SHH and BMP4. *Development* 135: 3301-3310.

## CHROMOSOMAL LOCATION

Genetic locus: TSHZ3 (human) mapping to 19q12; Tshz3 (mouse) mapping to 7 B2.

## SOURCE

TSHZ3 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TSHZ3 of human 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-79171 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-79171 X, 200 µg/0.1 ml.

## STORAGE

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

## APPLICATIONS

TSHZ3 (N-16) is recommended for detection of TSHZ3 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).

TSHZ3 (N-16) is also recommended for detection of TSHZ3 in additional species, including canine and porcine.

Suitable for use as control antibody for TSHZ3 siRNA (h): sc-76764, TSHZ3 siRNA (m): sc-76765, TSHZ3 shRNA Plasmid (h): sc-76764-SH, TSHZ3 shRNA Plasmid (m): sc-76765-SH, TSHZ3 shRNA (h) Lentiviral Particles: sc-76764-V and TSHZ3 shRNA (m) Lentiviral Particles: sc-76765-V.

TSHZ3 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

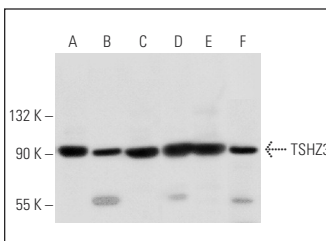
Molecular Weight of TSHZ3: 119 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or F9 cell lysate: sc-2245.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



TSHZ3 (N-16): sc-79171. Western blot analysis of TSHZ3 expression in A549 (A), C2C12 (B), HeLa (C), F9 (D) and NTERA-2 cl.D1 (E) whole cell lysates and mouse brain tissue extract (F).

## RESEARCH USE

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