SANTA CRUZ BIOTECHNOLOGY, INC.

TTF-1 (N-19): sc-8761



BACKGROUND

TTF-1 (Thyroid transcription factor-1, BCH, BHC, NK-2, Nkx2.1, Nkx2A, TEBP, TTF1) is a member of the Nkx2 family of homeodomain-containing transcription factors and regulates the transcriptional activity of thyroid-specific genes. TTF-1 is a protein that influences organogenisis and the maintenance of the differentiated phenotypes of various tissues including thyroid, lung and brain. TTF-1, which is present in the epithelium of the lung, regulates transcription of the surfactant proteins (SP) A, B and C and is essential for lung morphogenesis. In the thyroid, TTF-1 elevates the expression of thyroid specific markers, Thyroglobulin, Thyroperoxidase and thyrotropin receptors. TTF-1 interacts with SRC-1 and CBP *in vitro*.

REFERENCES

- Guazzi, S., et al. 1990. Thyroid nuclear factor 1 (TTF-1) contains a homeodomain and displays a novel DNA binding specificity. EMBO J. 9: 3631-3639.
- Lazzaro, D., et al. 1991. The transcription factor TTF-1 is expressed at the onset of thyroid and lung morphogenesis and in restricted regions of the foetal brain. Development 113: 1093-1104.
- Lints, T.J., et al. 1993. Nkx-2.5: a novel murine homeobox gene expressed in early heart progenitor cells and their myogenic descendants. Development 119: 419-431.
- 4. Bohinski, R.J., et al. 1994. The lung-specific surfactant protein B gene promoter is a target for thyroid transcription factor 1 and hepatocyte nuclear factor 3, indicating common factors for organ-specific gene expression along the foregut axis. Mol. Cell. Biol. 14: 5671-5681.
- 5. Saiardi, A., et al. 1995. Cloning and sequence analysis of human thyroid transcription factor 1. Biochim. Biophys. Acta 1261: 307-310.
- Ikeda, K., et al. 1995. Gene structure and expression of human thyroid transcription factor-1 in respiratory epithelial cells. J. Biol. Chem. 270: 8108-8114.
- 7. Bingle, C.D. 1997. Thyroid transcription factor-1. Int. J. Biochem. Cell Biol. 29: 1471-1473.

CHROMOSOMAL LOCATION

Genetic locus: NKX2-1/NKX2-4 (human) mapping to 14q13.3; Nkx2-4 (mouse) mapping to 2 G2, Nkx2-1 (mouse) mapping to 12 C1.

SOURCE

TTF-1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TTF-1 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8761 P, (100 μ g 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-8761 X, 200 $\mu g/0.1$ ml.

APPLICATIONS

TTF-1 (N-19) is recommended for detection of TTF-1 and NKX2-4 human and mouse origin and TTF-1 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TTF-1 (N-19) is also recommended for detection of TTF-1 in additional species, including canine, bovine, porcine and avian.

TTF-1 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TTF-1: 38 kDa.

Positive Controls: A549 cell lysate: sc-2413 or TTF-1 (h2): 293T Lysate: sc-159187.

DATA



TTF-1 (N-19): sc-8761. Western blot analysis of TTF-1 expression in non-transfected: sc-117752 (A) and human TTF-1 transfected: sc-159187 (B) 293T whole cell lysates.

STORAGE

Store at 4° C, **D0 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.

PROTOCOLS

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

see TTF-1 (8G7G3/1): sc-53136.

MONOS Satisfation Guaranteed

Try **TTF-1 (8G7G3/1):** sc-53136 or **TTF-1 (F-12):** sc-25331, our highly recommended monoclonal alternatives to TTF-1 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates,

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com