SANTA CRUZ BIOTECHNOLOGY, INC.

TTF-1 (SPM150): sc-56606

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 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

1. Zannini, M., et al. 1996. Mapping and functional role of phosphorylation sites in the TTF-1. J. Biol. Chem. 271: 2249-2254.
2. Ohe, K., et al. 1996. Interferon-γ suppresses thyrotropin receptor promoter activity by reducing TTF-1 binding to its recognition site. Mol. Endocrinol. 10: 826-836.
3. Nakazato, M., et al. 1997. Transcription of the TTF-1 gene from a newly defined start site: positive regulation by TTF-1 in the thyroid. Biochem. Biophys. Res. Commun. 238: 748-752.
4. Oguchi, H., et al. 1998. Multiple transcripts encoded by the thyroid-specific enhancer-binding protein (T/EBP)/thyroid-specific transcription factor-1 (TTF-1) gene: evidence of autoregulation. Endocrinology 139: 1999-2006.
5. Katoh, R., et al. 2000. Expression of TTF-1 in human C cells and medullary thyroid carcinomas. Hum. Pathol. 31: 386-393.
6. Nakazato, M., et al. 2000. Thyroglobulin repression of TTF-1 gene expression is mediated by decreased DNA binding of nuclear factor I proteins which control constitutive TTF-1 expression. Mol. Cell. Biol. 20: 8499-8512.
7. Gereben, B., et al. 2001. The human, but not rat, DIO2 gene is stimulated by TTF-1. Mol. Endocrinol. 15: 112-124.

CHROMOSOMAL LOCATION

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

SOURCE

TTF-1 (SPM150) is a mouse monoclonal antibody raised against recombinant full length TTF-1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

TTF-1 (SPM150) is recommended for detection of TTF-1 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TTF-1 siRNA (h): sc-36756, TTF-1 siRNA (m): sc-36757, TTF-1 shRNA Plasmid (h): sc-36756-SH, TTF-1 shRNA Plasmid (m): sc-36757-SH, TTF-1 shRNA (h) Lentiviral Particles: sc-36756-V and TTF-1 shRNA (m) Lentiviral Particles: sc-36757-V.

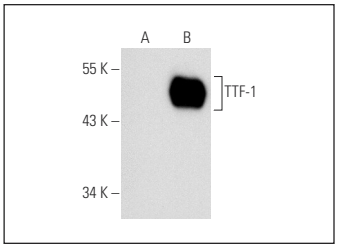
Molecular Weight of TTF-1: 38 kDa.

Positive Controls: A549 cell lysate: sc-2413, TTF-1 (h2): 293T Lysate: sc-159187 or TT whole cell lysate: sc-364195.

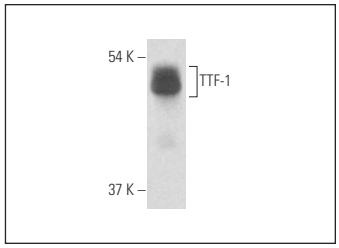
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TTF-1 (SPM150): sc-56606. 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.



TTF-1 (SPM150): sc-56606. Western blot analysis of TTF-1 expression in TT whole cell lysate.

SELECT PRODUCT CITATIONS

1. Esumi, G., et al. 2011. Effect of Insulin-like growth factors on lung development in a nitrofen-induced CDH rat model. Pediatr. Surg. Int. 27: 187-192.

RESEARCH USE

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

CONJUGATES

See **TTF-1 (8G7G3/1): sc-53136** for TTF-1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.