SANTA CRUZ BIOTECHNOLOGY, INC.

TTF-1 (h2): 293T Lysate: sc-159187

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

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3. Nakazato, M., et al. 1997. Transcription of the thyroid transcription factor-1 (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 thyroid transcription factor-1 (TTF-1) in human C cells and medullary thyroid carcinomas. Hum. Pathol. 31: 386-393.
6. Nakazato, M., et al. 2000. Thyroglobulin repression of thyroid transcription factor 1 (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 thyroid transcription factor-1 (TTF-1). Mol. Endocrinol. 15: 112-124.
8. Yi, M., et al. 2002. Role of CBP/p300 and SRC-1 in transcriptional regulation of the pulmonary surfactant protein-A (SP-A) gene by thyroid transcription factor-1 (TTF-1). J. Biol. Chem. 277: 2997-3005.
9. Wert, S.E., et al. 2002. Increased expression of thyroid transcription factor-1 (TTF-1) in respiratory epithelial cells inhibits alveolarization and causes pulmonary inflammation. Dev. Biol. 242: 75-87.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: NKX2-1 (human) mapping to 14q13.3.

PRODUCT

TTF-1 (h2): 293T Lysate represents a lysate of human TTF-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TTF-1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive TTF-1 antibodies. Recommended use: 10-20 µl per lane.

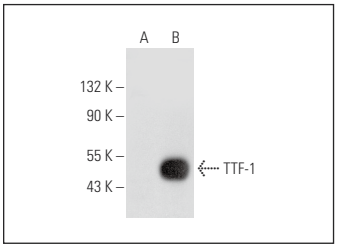
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TTF-1 (E-4): sc-514992 is recommended as a positive control antibody for Western Blot analysis of enhanced human TTF-1 expression in TTF-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

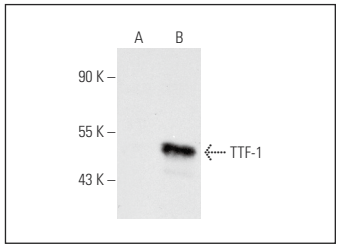
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



TTF-1 (E-4): sc-514992. 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 (F-12): sc-25331. 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.

RESEARCH USE

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