

# TTF-1 (8G7G3/1): sc-53136

## 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 organogenesis 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*.

## CHROMOSOMAL LOCATION

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

## SOURCE

TTF-1 (8G7G3/1) is a mouse monoclonal antibody raised against full length recombinant TTF-1 of rat origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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-53136 X, 200 µg/0.1 ml.

TTF-1 (8G7G3/1) is available conjugated to agarose (sc-53136 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53136 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53136 PE), fluorescein (sc-53136 FITC), Alexa Fluor® 488 (sc-53136 AF488), Alexa Fluor® 546 (sc-53136 AF546), Alexa Fluor® 594 (sc-53136 AF594) or Alexa Fluor® 647 (sc-53136 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53136 AF680) or Alexa Fluor® 790 (sc-53136 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

TTF-1 (8G7G3/1) 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

TTF-1 (8G7G3/1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

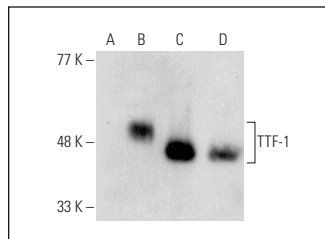
Molecular Weight of TTF-1: 38 kDa.

Positive Controls: SHP-77 whole cell lysate: sc-364258, TTF-1 (h2): 293T Lysate: sc-159187 or TT whole cell lysate: sc-364195.

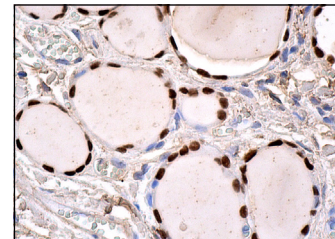
## STORAGE

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

## DATA



TTF-1 (8G7G3/1) HRP: sc-53136 HRP. Direct western blot analysis of TTF-1 expression in non-transfected 293T: sc-117752 (A), human TTF-1 transfected 293T: sc-159187 (B), TT (C) and SHP-77 (D) whole cell lysates.



TTF-1 (8G7G3/1): sc-53136. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid tissue showing nuclear staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Mueller, J.K., et al. 2012. Transcription of the human EAP1 gene is regulated by upstream components of a puberty-controlling tumor suppressor gene network. *Mol. Cell. Endocrinol.* 351: 184-198.
- McIntyre, B.A., et al. 2014. Expansive generation of functional airway epithelium from human embryonic stem cells. *Stem Cells Transl. Med.* 3: 7-17.
- Chen, P.M., et al. 2015. NKX2-1-mediated p53 expression modulates lung adenocarcinoma progression via modulating IKKβ/NFκB activation. *Oncotarget* 6: 14274-14289.
- Mc Laughlin, D., et al. 2016. Notochord manipulation does not impact oesophageal and tracheal formation from isolated foregut in 3D explant culture. *Pediatr. Surg. Int.* 32: 29-35.
- Huang, T.W., et al. 2017. The role of thyroid transcription factor-1 and tumor differentiation in resected lung adenocarcinoma. *Sci. Rep.* 7: 14222.
- Jin, H., et al. 2018. Surfactant protein C dampens inflammation by decreasing JAK/Stat activation during lung repair. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 314: L882-L892.
- Li, X., et al. 2020. Clinicopathological characteristics and genetic analysis of pulmonary carcinoid tumors: a single-center retrospective cohort study and literature review. *Oncol. Lett.* 19: 2446-2456.
- Lopez-Campistrous, A., et al. 2021. Gene expression profile of epithelial-mesenchymal transition mediators in papillary thyroid cancer. *Endocrine* 72: 452-461.

## RESEARCH USE

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

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