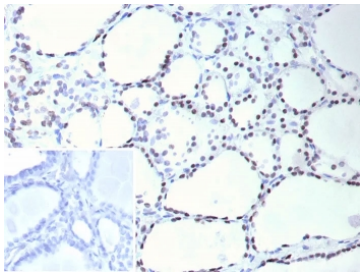
Thyroid transcription factor 1 Antibody / TTF-1 / NX2.1 [clone NX2.1/9036] (V5552)

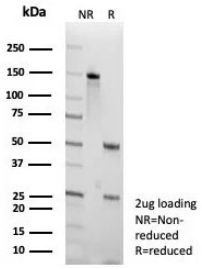
Catalog No.	Formulation	Size
V5552-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5552-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5552SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	NX2.1/9036
Purity	Protein A/G affinity
UniProt	P43699
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Thyroid transcription factor 1 antibody is available for research use only.



Thyroid transcription factor 1 Antibody Thyroid IHC. Immunohistochemistry of FFPE human thyroid tissue stained using Thyroid transcription factor 1 antibody. The mouse monoclonal clone NX2.1/9036 antibody demonstrates strong nuclear staining in thyroid follicular epithelial cells lining thyroid follicles, consistent with the nuclear localization of Thyroid transcription factor 1 (NKX2-1). Nuclear immunoreactivity highlights thyroid follicular epithelial lineage and reflects the established role of NKX2-1 as a transcription factor regulating thyroid epithelial differentiation and thyroid hormone gene expression. Inset: PBS used in place of primary antibody (secondary antibody negative control). HIER: boil tissue sections in pH9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free Thyroid transcription factor 1 antibody (clone NX2.1/9036) as confirmation of integrity and purity.

Description

Thyroid transcription factor 1 (NKX2-1) is a nuclear homeobox transcription factor that regulates epithelial lineage development in the lung, thyroid gland, and forebrain. The protein functions as a DNA-binding transcriptional regulator that controls expression of genes required for epithelial differentiation and organ development. The Thyroid transcription factor 1 Antibody recognizes this lineage-associated transcription factor, which localizes to the nuclei of epithelial cells in respiratory epithelium and thyroid follicular epithelium.

Thyroid transcription factor 1 antibody, also referred to as NKX2-1 antibody or TTF-1 antibody in the literature, detects a nuclear transcription factor that plays a central role in regulating tissue-specific gene expression. NKX2-1 contains a conserved homeobox DNA-binding domain that allows the protein to interact with regulatory regions of target genes and control transcriptional programs involved in epithelial lineage specification and differentiation.

In lung tissue, NKX2-1 regulates genes associated with respiratory epithelial identity and pulmonary epithelial differentiation. The transcription factor controls expression of several lung-specific genes including surfactant proteins that are produced by alveolar epithelial cells. Through these regulatory activities, NKX2-1 contributes to pulmonary epithelial development and maintenance of respiratory epithelial function.

In the thyroid gland, NKX2-1 functions as an important regulator of thyroid follicular epithelial cell differentiation and thyroid hormone biosynthesis. The transcription factor activates thyroid-specific genes including thyroglobulin and thyroid peroxidase that are essential for thyroid hormone production. These transcriptional regulatory functions establish NKX2-1 as a key factor in maintaining the differentiated phenotype of thyroid follicular epithelial cells.

Because NKX2-1 functions as a nuclear transcription factor controlling epithelial gene expression, it remains widely studied in research focused on epithelial lineage determination, developmental biology, and transcriptional regulation. A Thyroid transcription factor 1 antibody such as clone NX2.1/9036 provides a useful tool for studies investigating transcription factor localization, epithelial differentiation, and gene regulatory pathways associated with lung and thyroid epithelial tissues.

Learn more about TTF-1 / NKX2.1 biology, diagnostic applications, and additional validated products on our TTF-1 Antibody page.

Application Notes

Optimal dilution of the Thyroid transcription factor 1 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (within amino acids 1-200) of human TTF-1 protein was used as the immunogen for the Thyroid transcription factor 1 antibody.

Storage

Aliquot the Thyroid transcription factor 1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

NKX2-1 antibody, TTF-1 antibody, TTF1 antibody, TITF1 antibody, Thyroid transcription factor antibody

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