

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NKX2.1 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2054E
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	E. coli-derived recombinant human NKX2.1 Ala40-Pro111 Accession # P43699
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

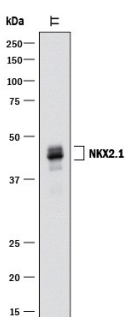
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	3-25 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below

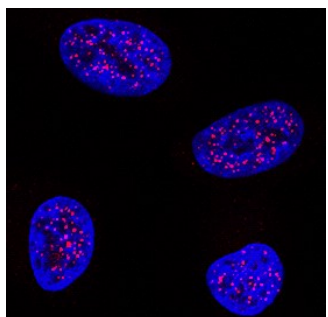
DATA

Western Blot



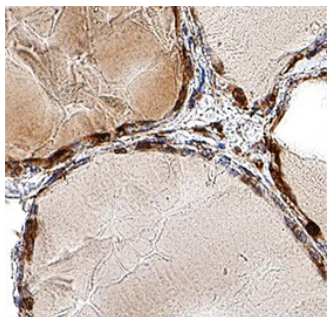
Detection of Human NKX2.1 by Western Blot. Western blot shows lysates of TT human medullary thyroid cancer cell line. PVDF membrane was probed with 1 µg/mL of Rabbit Anti-Human NKX2.1 Monoclonal Antibody (Catalog # MAB94581) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band was detected for NKX2.1 at approximately 40-45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



NKX2.1 in A549 Human Cell Line. NKX2.1 was detected in immersion fixed A549 human lung carcinoma cell line using Rabbit Anti-Human NKX2.1 Monoclonal Antibody (Catalog # MAB94581) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



NKX2.1 in Human Thyroid. NKX2.1 was detected in immersion fixed paraffin-embedded sections of human thyroid using Rabbit Anti-Human NKX2.1 Monoclonal Antibody (Catalog # MAB94581) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to nuclei. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

NK2 homeobox 1 (NKX2-1), also known as thyroid transcription factor 1 (TTF-1), is a 371 aminoacids (aa) protein encoded by the NKX2-1 gene. Expression of NKX2-1 transcription factor is the earliest indication of the establishment of respiratory progenitors as well as thyroid epithelium in the ventral foregut endoderm. NKX2-1 is critical for the expression of many pulmonary specific genes, including surfactant proteins SP-A, -B, and -C, as well as thyroid specific genes that are important in the maintenance of the thyroid differentiation phenotype.