

**DESCRIPTION**

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

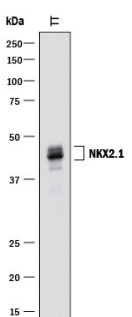
**APPLICATIONS**

**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.

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

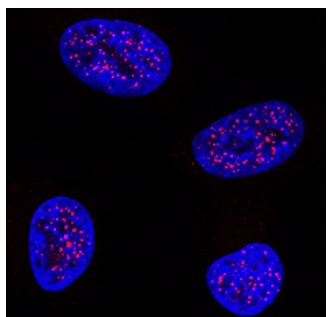
**DATA**

**Western Blot**



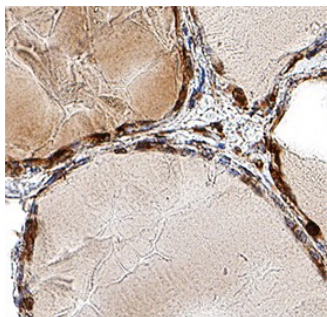
**Detection of Human NKX2.1 by Western Blot.** Western blot shows lysates of TT human medullary thyroid cancer cell line. PVDF membrane was probed with 1 µg/mL of Rabbit Anti-Human NKX2.1 Monoclonal Antibody (Catalog # MAB94581) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # 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**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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.