

## PRODUCT INFORMATION

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**Product name :** NKX2-1 antibody

**Product type :** Primary antibodies

**Description :** Rabbit polyclonal to NKX2-1

**Immunogen :** 3 synthetic peptides (human) conjugated to KLH

**Reacts with :** Human, Mouse

**Tested applications :** ELISA, WB and IF

## GENE INFORMATION

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**Gene Symbol :** NKX2-1

**Gene Name :** NK2 homeobox 1

**Ensembl ID :** ENSG00000136352

**Entrez GeneID :** 7080

**Omim ID :** 600635

**Swiss-Prot :** P43699

**Molecular weight of NKX2-1 :** 41.7kDa

**Function :** Transcription factor that binds and activates the promoter of thyroid specific genes such as thyroglobulin, thyroperoxidase, and thyrotropin receptor. Crucial in the maintenance of the thyroid differentiation phenotype. May play a role in lung development and surfactant homeostasis

**Expected subcellular localization :** Nucleus

**Summary :** This gene encodes a protein initially identified as a thyroid-specific transcription factor. The encoded protein binds to the thyroglobulin promoter and regulates the expression of thyroid-specific genes but has also been shown to regulate the expression of genes involved in morphogenesis. Mutations and deletions in this gene are associated with benign hereditary chorea, choreoathetosis, congenital hypothyroidism, and neonatal respiratory distress, and may be associated with thyroid cancer. Multiple transcript variants encoding different isoforms have been found for this gene. This gene shares the symbol/alias 'TFF1' with another gene, transcription termination factor 1, which plays a role in ribosomal gene transcription. [provided by RefSeq, Apr 2011]

## **APPLICATION NOTE**

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### **Recommended dilution :**

- **ELISA:** Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A minimum titer of 1/30000 is determined. Appropriate specificity controls were run.
- **WB:** 1/5000.
- **IF:** 1/1000.

**Optimal dilutions/concentration should be determined by the end user.**

**Raised in :** Rabbit

**Clonality :** Polyclonal

**Isotype :** IgG

**Purity :** Purified Antibody

**Storage buffer :** 0.5 X PBS, 50% glycerol containing a final concentration of 0.1% BSA and 0.01% Thimerosal.

**Form :** Liquid

**Storage instruction :** Store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

## WESTERN BLOT ON RECOMBINANT PROTEIN

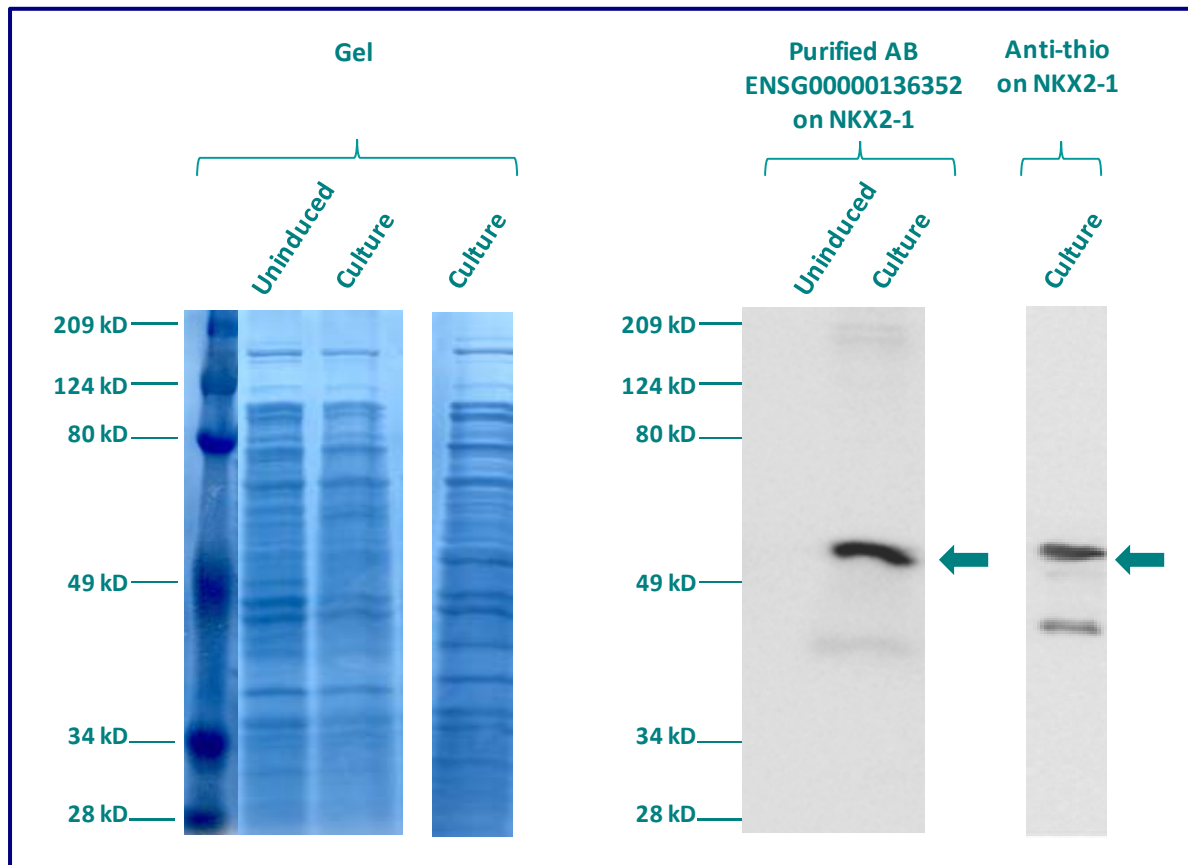
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The purified antibody ENSG00000136352 has been tested at 1/5000 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells).

An anti-thio has been tested at 1/5000 on induced culture of E.coli (one shot Top10 competent cells) as a positive control.

Plasmid name : pBAD-DEST49.

Molecular weight of NKX2-1 : 52.6kDa (38.6kDa + another 14kDa for the tag).



Gel concentration: 10%

Blocking: in 5% non-fat milk-PBST solution

1<sup>st</sup> Antibody: The antibodies are diluted in blocking buffer.

- Dilute the purified antibody ENSG00000136352 at 1: 5000
- Dilute the anti-thio at 1:5000

60 minutes of incubation

2<sup>nd</sup> Antibody: The antibody is diluted in blocking buffer.

- Dilute the anti-Rabbit IgG HRP conjugated at 1/10000
- 60 minutes of incubation

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## IMMUNOFLUORESCENCE ANALYSIS

**Immunofluorescence analysis of Homeobox protein Nkx-2.1 (NKX2-1) expression in 2 cells lines (HELA, Capan-2). The purified Antibody ENSG00000136352 has been tested at 1/5000.**

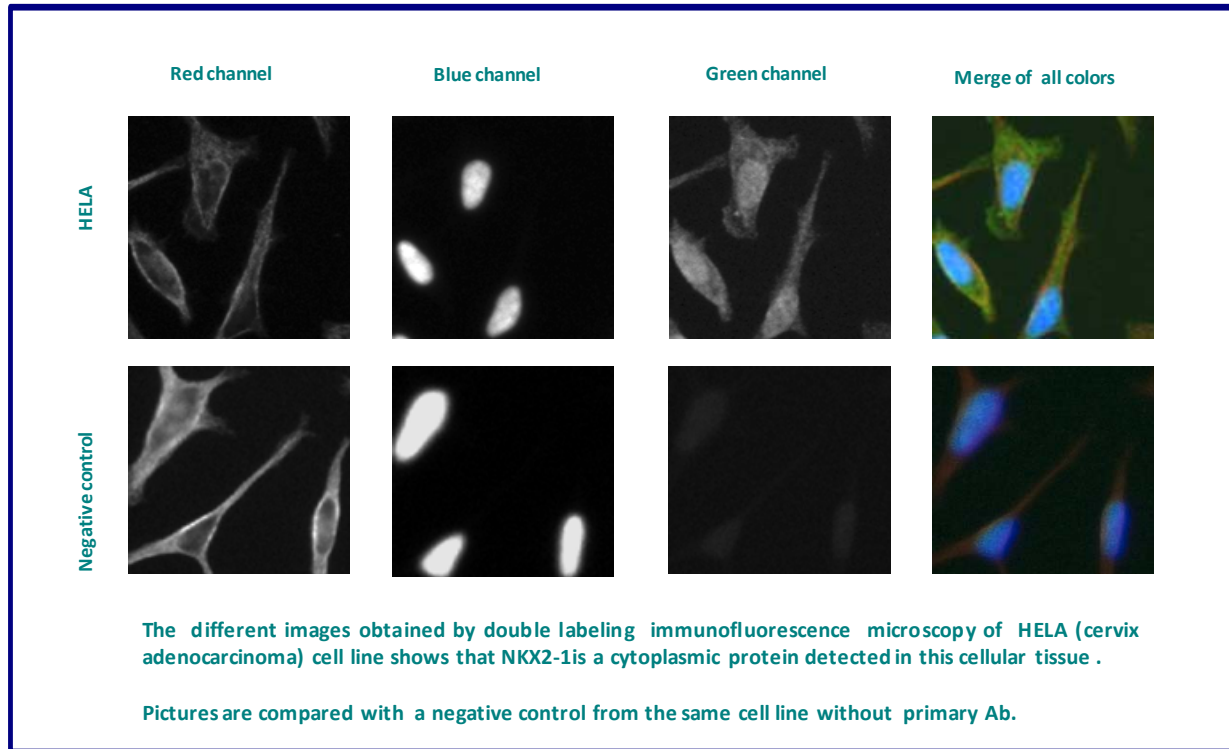
**Red staining : cytoskeleton (microtubules/ $\alpha$ -tubuline)**

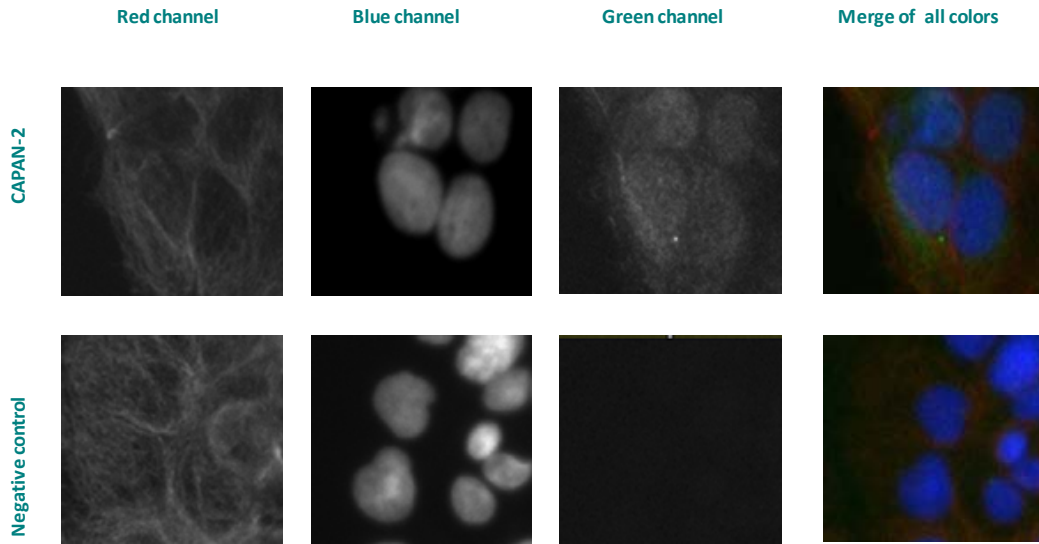
**Blue staining : nucleus (Hoechst)**

**Green staining : anti- NKX2-1 antibody (purified)**

**Expected subcellular location : Nucleus**

**Expected tissue specificity : Thyroid and lung**





The different images obtained by double labeling immunofluorescence microscopy of CAPAN- 2 (Pancreas adenocarcinoma) cell line shows that NKX2-1is a cytoplasmic protein detected in this cellular tissue .

Pictures are compared with a negative control from the same cell line without primary Ab.