

**Anti-NLK Rabbit Monoclonal Antibody**  
**Catalog # ABO16018****Specification**

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**Anti-NLK Rabbit Monoclonal Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB, FC                 |
| Primary Accession | <a href="#">Q9UBE8</a> |
| Host              | Rabbit                 |
| Isotype           | IgG                    |
| Reactivity        | Human                  |
| Clonality         | Monoclonal             |
| Format            | Liquid                 |

**Description**

Anti-NLK Rabbit Monoclonal Antibody . Tested in WB, Flow Cytometry applications. This antibody reacts with Human.

**Anti-NLK Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 51701

**Other Names**

Serine/threonine-protein kinase NLK, 2.7.11.24, Nemo-like kinase, Protein LAK1, NLK, LAK1  
{ECO:0000312|EMBL:AAD56013.1}

**Calculated MW**

58 kDa KDa

**Application Details**

WB 1:500-1:2000<br>FC 1:50

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human NLK

**Purification**

Affinity-chromatography

**Storage**

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

**Anti-NLK Rabbit Monoclonal Antibody - Protein Information**

**Name** NLK

**Synonyms** LAK1 {ECO:0000312|EMBL:AAD56013.1}

### Function

Serine/threonine-protein kinase that regulates a number of transcription factors with key roles in cell fate determination (PubMed:<a href="http://www.uniprot.org/citations/12482967" target="\_blank">12482967</a>, PubMed:<a href="http://www.uniprot.org/citations/14960582" target="\_blank">14960582</a>, PubMed:<a href="http://www.uniprot.org/citations/15004007" target="\_blank">15004007</a>, PubMed:<a href="http://www.uniprot.org/citations/15764709" target="\_blank">15764709</a>, PubMed:<a href="http://www.uniprot.org/citations/20061393" target="\_blank">20061393</a>, PubMed:<a href="http://www.uniprot.org/citations/20874444" target="\_blank">20874444</a>, PubMed:<a href="http://www.uniprot.org/citations/21454679" target="\_blank">21454679</a>). Positive effector of the non-canonical Wnt signaling pathway, acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2 (PubMed:<a href="http://www.uniprot.org/citations/15004007" target="\_blank">15004007</a>, PubMed:<a href="http://www.uniprot.org/citations/15764709" target="\_blank">15764709</a>). Negative regulator of the canonical Wnt/beta-catenin signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/12482967" target="\_blank">12482967</a>). Binds to and phosphorylates TCF7L2/TCF4 and LEF1, promoting the dissociation of the TCF7L2/LEF1/beta-catenin complex from DNA, as well as the ubiquitination and subsequent proteolysis of LEF1 (PubMed:<a href="http://www.uniprot.org/citations/21454679" target="\_blank">21454679</a>). Together these effects inhibit the transcriptional activation of canonical Wnt/beta-catenin target genes (PubMed:<a href="http://www.uniprot.org/citations/12482967" target="\_blank">12482967</a>, PubMed:<a href="http://www.uniprot.org/citations/21454679" target="\_blank">21454679</a>). Negative regulator of the Notch signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/20118921" target="\_blank">20118921</a>). Binds to and phosphorylates NOTCH1, thereby preventing the formation of a transcriptionally active ternary complex of NOTCH1, RBPJ/RBPSUH and MAML1 (PubMed:<a href="http://www.uniprot.org/citations/20118921" target="\_blank">20118921</a>). Negative regulator of the MYB family of transcription factors (PubMed:<a href="http://www.uniprot.org/citations/15082531" target="\_blank">15082531</a>). Phosphorylation of MYB leads to its subsequent proteolysis while phosphorylation of MYBL1 and MYBL2 inhibits their interaction with the coactivator CREBBP (PubMed:<a href="http://www.uniprot.org/citations/15082531" target="\_blank">15082531</a>). Other transcription factors may also be inhibited by direct phosphorylation of CREBBP itself (PubMed:<a href="http://www.uniprot.org/citations/15082531" target="\_blank">15082531</a>). Acts downstream of IL6 and MAP3K7/TAK1 to phosphorylate STAT3, which is in turn required for activation of NLK by MAP3K7/TAK1 (PubMed:<a href="http://www.uniprot.org/citations/15004007" target="\_blank">15004007</a>, PubMed:<a href="http://www.uniprot.org/citations/15764709" target="\_blank">15764709</a>). Upon IL1B stimulus, cooperates with ATF5 to activate the transactivation activity of C/EBP subfamily members (PubMed:<a href="http://www.uniprot.org/citations/25512613" target="\_blank">25512613</a>). Phosphorylates ATF5 but also stabilizes ATF5 protein levels in a kinase-independent manner (PubMed:<a href="http://www.uniprot.org/citations/25512613" target="\_blank">25512613</a>). Acts as an inhibitor of the mTORC1 complex in response to osmotic stress by mediating phosphorylation of RPTOR, thereby preventing recruitment of the mTORC1 complex to lysosomes (PubMed:<a href="http://www.uniprot.org/citations/26588989" target="\_blank">26588989</a>).

### Cellular Location

Nucleus {ECO:0000250|UniProtKB:O54949}. Cytoplasm {ECO:0000250|UniProtKB:O54949}. Note=Predominantly nuclear. A smaller fraction is cytoplasmic. {ECO:0000250|UniProtKB:O54949}

### Anti-NLK Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Anti-NLK Rabbit Monoclonal Antibody - Images

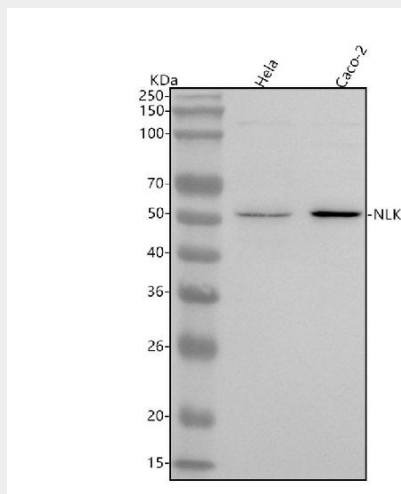


Figure 1. Western blot analysis of NLK using anti-NLK antibody (M02091-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human HeLa whole cell lysates,

Lane 2: human Caco-2 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NLK antigen affinity purified monoclonal antibody (Catalog # M02091-1) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for NLK at approximately 58 kDa. The expected band size for NLK is at 58 kDa.