

Mouse Nlk Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP13929b**Specification**

Mouse Nlk Antibody (C-term) Blocking peptide - Product InformationPrimary Accession [O54949](#)**Mouse Nlk Antibody (C-term) Blocking peptide - Additional Information****Gene ID** 18099**Other Names**

Serine/threonine-protein kinase NLK, Nemo-like kinase, Nlk {ECO:0000312|EMBL:AAC244991}

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13929b was selected from the C-term region of Mouse Nlk. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Nlk Antibody (C-term) Blocking peptide - Protein Information**Name** Nlk {ECO:0000312|EMBL:AAC24499.1}**Function**

Serine/threonine-protein kinase that regulates a number of transcription factors with key roles in cell fate determination (PubMed:10391247, PubMed:11745377, PubMed:12482967, PubMed:12556497, PubMed:14720327, PubMed:15004007, PubMed:17785444, PubMed:18765672, PubMed:20874444, PubMed:21118996, PubMed:9448268). Positive effector of the non-canonical Wnt signaling pathway,

acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2 (PubMed:15004007). Negative regulator of the canonical Wnt/beta-catenin signaling pathway (PubMed:20194509). 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:12556497). Together these effects inhibit the transcriptional activation of canonical Wnt/beta-catenin target genes (PubMed:12556497). Negative regulator of the Notch signaling pathway (PubMed:20118921). Binds to and phosphorylates NOTCH1, thereby preventing the formation of a transcriptionally active ternary complex of NOTCH1, RBPJ/RBPSUH and MAML1 (PubMed:20118921). Negative regulator of the MYB family of transcription factors (PubMed:16055500). Phosphorylation of MYB leads to its subsequent proteolysis while phosphorylation of MYBL1 and MYBL2 inhibits their interaction with the coactivator CREBBP (PubMed:15082531, PubMed:15308626, PubMed:16055500). Other transcription factors may also be inhibited by direct phosphorylation of CREBBP itself (PubMed:15082531, PubMed:15308626, PubMed:16055500). Acts downstream of IL6 and MAP3K7/TAK1 to phosphorylate STAT3, which is in turn required for activation of NLK by MAP3K7/TAK1 (PubMed:15004007). Upon IL1B stimulus, cooperates with ATF5 to activate the transactivation activity of C/EBP subfamily members (By similarity). Phosphorylates ATF5 but also stabilizes ATF5 protein levels in a kinase-independent manner (By similarity). 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 (By similarity).

Cellular Location

Nucleus. Cytoplasm Note=Predominantly nuclear. A smaller fraction is cytoplasmic

Tissue Location

Expressed at high levels in the brain, and at lower levels in heart, kidney, lung and liver.

Mouse Nlk Antibody (C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

Mouse Nlk Antibody (C-term) Blocking peptide - Images

Mouse Nlk Antibody (C-term) Blocking peptide - Background

Role in cell fate determination, required for differentiation of bone marrow stromal cells. Acts downstream of MAP3K7 and HIPK2 to negatively regulate the canonical Wnt/beta-catenin signaling pathway and the phosphorylation and destruction of the MYB transcription factor. May suppress a wide range of transcription factors by phosphorylation of the coactivator, CREBBP. Involved in TGFbeta-mediated mesoderm induction, acting downstream of MAP3K7/TAK1 to phosphorylate STAT3.

Mouse Nlk Antibody (C-term) Blocking peptide - References

Li, M., et al. J. Biol. Chem. 285(18):13397-13404(2010) Nifuji, A., et al. Exp. Cell Res. 316(7):1127-1136(2010) Ishitani, T., et al. Nat. Cell Biol. 12(3):278-285(2010) Martinez, G., et al. Invest. Ophthalmol. Vis. Sci. 50(10):4794-4806(2009) Harwood, B.N., et al. Dev. Dyn. 237(4):1099-1111(2008)