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NLK-T286 Blocking Peptide (Center)

Synthetic peptide
Catalog # BP7545c

Specification

NLK-T286 Blocking Peptide (Center) - Product Information

Primary Accession	Q9UBE8
Other Accession	D3ZSZ3, O54949, E1BMN8, NP_057315.3

NLK-T286 Blocking Peptide (Center) - Additional Information

Gene ID 51701

Other Names
Serine/threonine-protein kinase NLK, Nemo-like kinase, Protein LAK1, NLK, LAK1 {ECO:0000312|EMBL:AAD560131}

Target/Specificity
The synthetic peptide sequence is selected from aa 290-300 of HUMAN NLK

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.

NLK-T286 Blocking Peptide (Center) - 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:14960582, PubMed:12482967, PubMed:15004007, PubMed:15764709, PubMed:20061393, PubMed:20874444, PubMed:21454679). Positive effector of the non-canonical Wnt signaling pathway, acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2 (PubMed:15004007, PubMed:<a

href="http://www.uniprot.org/citations/15764709" target="_blank">15764709). Negative regulator of the canonical Wnt/beta-catenin signaling pathway (PubMed:12482967). 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:21454679). Together these effects inhibit the transcriptional activation of canonical Wnt/beta-catenin target genes (PubMed:12482967, PubMed:21454679). 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:15082531). Phosphorylation of MYB leads to its subsequent proteolysis while phosphorylation of MYBL1 and MYBL2 inhibits their interaction with the coactivator CREBBP (PubMed:15082531). Other transcription factors may also be inhibited by direct phosphorylation of CREBBP itself (PubMed:15082531). Acts downstream of IL6 and MAP3K7/TAK1 to phosphorylate STAT3, which is in turn required for activation of NLK by MAP3K7/TAK1 (PubMed:15004007, PubMed:15764709). Upon IL1B stimulus, cooperates with ATF5 to activate the transactivation activity of C/EBP subfamily members (PubMed:25512613). Phosphorylates ATF5 but also stabilizes ATF5 protein levels in a kinase-independent manner (PubMed:25512613). 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:26588989).

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

NLK-T286 Blocking Peptide (Center) - Protocols

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

- Blocking Peptides

NLK-T286 Blocking Peptide (Center) - Images

NLK-T286 Blocking Peptide (Center) - References

Kim, S., et al. J. Biol. Chem. 285(11):8122-8129(2010)
Ishitani, T., et al. Nat. Cell Biol. 12(3):278-285(2010)
Shi, Y., et al. Mol. Cell. Biochem. 333 (1-2), 293-298 (2010) :
Emami, K.H., et al. Prostate 69(14):1481-1492(2009)
Saijo, K., et al. Cell 137(1):47-59(2009)
Wistow, G., et al. Mol. Vis. 8, 196-204 (2002) :
Kortenjann, M., et al. Gene 278 (1-2), 161-165 (2001) :

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Volorio, S., et al. DNA Seq. 9 (5-6), 307-315 (1998) :