OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RN216856

Nlk (NM_001191924) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nlk (NM_001191924) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Nlk
Synonyms:	RGD1561602
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

>RN216856 representing NM_001191924
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCTCTTTGTGGCACACGAGCCAACGCAAAAATGATGGCGGCTTACAATGGCGGTACATCTGCAGCAG
CAGCAGGTCACCACCACCACCATCACCACCACCTTCCACACCTTCCTCCTCCTCACCTTCACCACCACCA
CCACCCTCAACACCACCTTCATCCGGGGTCGGCTGCTGCTGTACACCCTGTACAGCAGCATACGTCTTCG
GCAGCTGCGGCAGCCGCAGCGGCAGCTGCGGCCGCAGCCATGTTAAACCCTGGGCAACAACAGCCATATT
TCCCATCACCGGCACCTGGTCAGGCTCCTGGGCCAGCTGCAGCAGCCCCAGCTCAGGTACAGGCTGCTGC
AGCTGCTACAGTTAAGGCGCACCATCATCAGCACTCGCATCATCCGCAACAGCAGCTGGACATTGAGCCG
GATAGACCTATTGGATATGGAGCCTTTGGTGTTGTCTGGTCAGTAACAGATCCAAGAGATGGAAAGAGAG
TAGCACTCAAAAAGATGCCCAACGTCTTCCAGAATCTGGTCTCTTGCAAAAGAGTCTTCCGGGAATTGAA
GATGTTGTGTTTTTTTAAACATGATAATGTACTCTCTGCCCTTGACATACTCCAGCCTCCACACATTGAC
TATTTTGAAGAAATATATGTTGTCACAGAATTGATGCAGAGTGATCTACATAAAATTATCGTCTCTCCTC
AGCCACTCAGCTCAGATCATGTCAAAGTTTTTCTTTATCAGATTTTGCGAGGTTTGAAATATCTCCATTC
AGCTGGCATTTTACATCGCGACATTAAGCCGGGGAATCTCCTTGTGAACAGCAACTGTGTTCTAAAGATT
TGTGATTTTGGATTGGCCAGAGTGGAAGAATTGGATGAATCCCGTCACATGACTCAGGAAGTTGTTACTC
AGTATTACCGGGCTCCGGAGATCCTCATGGGCAGCCGCCATTACAGCAATGCTATTGACATCTGGTCTGT
GGGGTGCATCTTTGCAGAGCTGCTGGGCCGAAGGATACTGTTTCAGGCGCAGAGTCCCATTCAGCAGTTG
GATTTGATCACAGATCTGTTGGGCACGCCATCACTGGAAGCGATGAGGACAGCTTGTGAAGGTGCTAAGG
CACACATACTCAGGGGTCCTCACAAACAGCCATCTCTCCCTGTACTCTACACCCTTTCCAGCCAGGCCAC
ACATGAAGCCGTTCACCTGCTTTGCAGAATGTTGGTCTTTGATCCATCAAAAAGAATATCCGCTAAGGAT
GCCTTAGCCCACCCCTACCTAGATGAAGGGCGGCTGAGATACCATACATGTATGTGTAAGTGCTGCTTTT
CCACCTCGACGGGAAGAGTCTACACCAGTGACTTTGAGCCTGTCACCAACCCCAAATTTGATGACACCTT
TGAGAAGAACCTCAGCTCTGTCCGACAAGTTAAAGAAATTATCCACCAGTTCATTTTGGAACAGCAGAAA
GGAAACAGAGTACCTCTCTGCATTAACCCGCAGTCTGCTGCCTTTAAGAGCTTTATCAGTTCCACCGTCG
CTCAGCCGTCTGAGATGCCACCGTCTCCTCTGGTGTGGGAGTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001191924

Insert Size: 1584 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001191924.1, NP_001178853.1
RefSeq Size:	4747 bp
RefSeq ORF:	1584 bp
Locus ID:	497961
UniProt ID:	D3ZSZ3
Cytogenetics:	10q25
Gene Summary:	Serine/threonine-protein kinase that regulates a number of transcription factors with key roles in cell fate determination. Positive effector of the non-canonical Wnt signaling pathway, acting downstream of WNT5A, MAP3K7/TAK1 and HIPK2. Activation of this pathway causes binding to and phosphorylation of the histone methyltransferase SETDB1. The NLK-SETDB1 complex subsequently interacts with PPARG, leading to methylation of PPARG target promoters at histone H3K9 and transcriptional silencing. The resulting loss of PPARG target gene transcription inhibits adipogenesis and promotes osteoblastogenesis in mesenchymal stem cells (MSCs). Negative regulator of the canonical Wnt/beta-catenin signaling pathway. 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. Together these effects inhibit the transcriptional activation of canonical Wnt/beta-catenin target genes. Negative regulator of the Notch signaling pathway. Binds to and phosphorylates NOTCH1, thereby preventing the formation of a transcriptionally active ternary complex of NOTCH1, RBPJ/RBPSUH and MAML1. Negative regulator of the MYB family of transcription factors. Phosphorylation of MYB leads to its subsequent proteolysis while phosphorylation of MYBL1 and MYBL2 inhibits their interaction with the coactivator CREBBP. Other transcription factors may also be inhibited by direct phosphorylation of CREBBP itself. Acts downstream of IL6 and MAP3K7/TAK1 to phosphorylate STAT3, which is in turn required for activation of NLK by MAP3K7/TAK1. Upon IL1B stimulus, cooperates with ATF5 to activate the transactivation activity of C/EBP subfamily members. Phosphorylates ATF5 but also stabilizes ATF5 protein levels in a kinase-independent manner.[UniProtKB/Swiss-Prot Function]