

Product datasheet for MC200590

Cdk9 (NM_130860) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cdk9 (NM_130860) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cdk9
Synonyms:	PITALRE
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF: >BC003901 sequence for NM_130860
 GGGACCGGGAGCGCGGGAGCTGCGGCTGGGGCGCGCGCGCGCGCGGGAGGCGCGCTGGAGGTG
 GCCATGGCCAAGCAGTACGACTCGGTGGAATGCCCGTTCTGCGATGAGGTACCAAGTACGAGAACTTG
 CCAAGATCGGCCAAGGCACATTCCGGGAAGTCTTTAAAGCCAAGCACCGTCAGACGGGCCAGAAGGTGGC
 TCTGAAGAAAGTGTGATGGAGAATGAGAAGGAGGGTTCCCCATCACAGCCTTGAGGAAATCAAGATT
 CTACAGCTCCTAAAACATGAGAATGTGGTGAACCTAATTGAGATTTGTCGGACCAAAGCCTCACCGTATA
 ACCGCTGCAAGGGCAGCATCTATCTGGTGTGACTTCTGTGAGCATGACCTTGTGGGCTGCTGAGCAA
 CGTCTTAGTCAAGTTCACGTTGTCTGAGATCAAGAGAGTGATGCAGATGCTGCTGAACGGCTCTACTAC
 ATCCACAGGAACAAGATCCTGCACAGGGACATGAAGGCTGCGAATGTGCTCATTACCCGGGATGGGTCC
 TGAAGCTGGCAGATTTGGGCTGGCCCGTGCCTTCAGCCTAGCTAAGAATAGCCAGCCCAACCGATAAC
 CAACCGTGTGGTACATTGTGGTACCGGCTCCGGAGCTGCTGCTCGGAGAGCGGGACTACGGCCCGCC
 ATTGACCTTTGGGTGCTGGGTGCATCATGGCAGAGATGTGGACTCGTAGCCCTATCATGACGGGTAA
 CAGAGCAGCACCAGCTCGCCCTCATCAGCCAGCTCTGTGGCTCCATCACCCAGAGGTGTGGCAAACGT
 AGACAAGTATGAGCTGTTTAAAAGCTGGAACCTGTGAAGGGCCAGAAGCGGAAGGTGAAGGACCGTCTG
 AAGGCCTACGTGCGCGACCCCTATGCTCTGGACCTCATTGACAAGCTGCTGGTGTGGACCCCGCGCAGC
 GGATTGACAGTGACGATGCCCTCAACCAGACTTCTTCTGGTCCGACCCCATGCCCTCGGACCTCAAGGG
 CATGCTGTCTACTCACTTACGCTCTATGTTTGTAGTACCTGGCACCACCGCGGAAGGGCAGCCAGATC
 ACCCAGCAGTCCACCAACCAGAGCAGAAATCCCACCACCAACCAGACGGAATTTGACGTGTCTTCT
 GAGGCCGGAAGTGGCCGGTGTGTTCTTAGGTTAGGAGTGGATTGCTTCTTTGCATGGAACATGTGACA
 TGATGGGACATTTGAGATTTTCTCCTCCAGTACATATTAACCTCCACCCTGGCACTGGGAACAGCTGCCT
 GAGTGGGCTGGGGTGGAGCTATCCTGCCTGCCCTCTCTGGAGGTCTCAGCGTGGACACAAAGTGAAGGTG
 GGAGAGGCTCACCACTGTGACTTTCTAAGAACTACTTGCATGGTGGGAGGAAGGCACAGGTCCCTCGCC
 ATCGCCAGCTCTTCTCTGGATGAGAGTTTGGGGACAGAGGCGCTCCAAAATGGGCTACTTTTGGTCT
 GGACCTTAGGGGCTGGGGCTGTGTGAACCTCTGGTCTTTAAAAGGAGAAATTTATTTTGTGGTTGTTA
 AGTTTAGAGACATTCCTGGACGCAGTTTGATTGGTTAAATTTAAAGTTGGTTATTTTTTCCAGTAAAA
 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA



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Restriction Sites:	RsrII-NotI
ACCN:	NM_130860
Insert Size:	1119 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).
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:	<ol style="list-style-type: none">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:	<u>BC003901</u> , <u>AAH03901</u>
RefSeq Size:	1710 bp
RefSeq ORF:	1119 bp
Locus ID:	107951
UniProt ID:	<u>Q99J95</u>
Cytogenetics:	2 B

Gene Summary:

Protein kinase involved in the regulation of transcription. Member of the cyclin-dependent kinase pair (CDK9/cyclin-T) complex, also called positive transcription elongation factor b (P-TEFb), which facilitates the transition from abortive to productive elongation by phosphorylating the CTD (C-terminal domain) of the large subunit of RNA polymerase II (RNAP II) POLR2A, SUPT5H and RDBP. This complex is inactive when in the 7SK snRNP complex form. Phosphorylates EP300, MYOD1, RPB1/POLR2A and AR, and the negative elongation factors DSIF and NELF. Regulates cytokine inducible transcription networks by facilitating promoter recognition of target transcription factors (e.g. TNF-inducible RELA/p65 activation and IL-6-inducible STAT3 signaling). Promotes RNA synthesis in genetic programs for cell growth, differentiation and viral pathogenesis. P-TEFb is also involved in cotranscriptional histone modification, mRNA processing and mRNA export. Modulates a complex network of chromatin modifications including histone H2B monoubiquitination (H2Bub1), H3 lysine 4 trimethylation (H3K4me3) and H3K36me3; integrates phosphorylation during transcription with chromatin modifications to control co-transcriptional histone mRNA processing. The CDK9/cyclin-K complex has also a kinase activity towards CTD of RNAP II and can substitute for CDK9/cyclin-T P-TEFb in vitro. Replication stress response protein; the CDK9/cyclin-K complex is required for genome integrity maintenance, by promoting cell cycle recovery from replication arrest and limiting single-stranded DNA amount in response to replication stress, thus reducing the breakdown of stalled replication forks and avoiding DNA damage. In addition, probable function in DNA repair of isoform 2 via interaction with KU70/XRCC6. Promotes cardiac myocyte enlargement. RPB1/POLR2A phosphorylation on 'Ser-2' in CTD activates transcription. AR phosphorylation modulates AR transcription factor promoter selectivity and cell growth. DSIF and NELF phosphorylation promotes transcription by inhibiting their negative effect. The phosphorylation of MYOD1 enhances its transcriptional activity and thus promotes muscle differentiation (By similarity).[UniProtKB/Swiss-Prot Function]