

Product datasheet for MR205733

Cdk9 (NM_130860) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cdk9 (NM_130860) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cdk9
Synonyms:	PITALRE
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR205733 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAGCAGTACGACTCGGTGGAATGCCCGTTCTGCGATGAGGTCACCAAGTACGAGAACTTGCCA
AGATCGGCCAAGGCACATTCGGGGAAGTCTTTAAAGCCAAGCACCGTCAGACGGGCCAGAAGGTGGCTCT
GAAGAAAGTGTGATGGAGAATGAGAAGGAGGGTTCCCCATCACAGCCTTGAGGGAAATCAAGATTCTA
CAGCTCCTAAAACATGAGAATGTGGTGAACCTAATTGAGATTTGTCGGACCAAAGCCTCACCGTATAACC
GCTGCAAGGGCAGCATCTATCTGGTGTGACTTCTGTGAGCATGACCTTCTGGCTGCTGAGCAACGT
CTTAGTCAAGTTCACGTTGTCTGAGATCAAGAGAGTGATGCAGATGCTGCTGAACGGCCTCTACTACATC
CACAGGAACAAGATCCTGCACAGGGACATGAAGGCTGCGAATGTGCTCATTACCCGGGATGGGGTCTGA
AGCTGGCAGATTTTGGGCTGGCCCGTGCCTTCAGCCTAGCTAAGAATAGCCAGCCCAACCGATACACCAA
CCGTGTGGTGACATTGTGGTACCGGCTCCGGAGCTGCTGCTCGGAGAGCGGGACTACGGCCCGCCATT
GACCTTTGGGGTCTGGGTGCATCATGGCAGAGATGTGGACTCGTAGCCCTATCATGCAGGGTAACACAG
AGCAGCACCAGCTCGCCCTCATCAGCCAGCTCTGTGGTCCATCACCCAGAGGTGTGGCCAAACGTAGA
CAAGTATGAGCTGTTTAAAAGCTGGAACCTGTGAAGGGCCAGAAGCGGAAGGTGAAGACCGTCTGAAG
GCCTACGTGCGGACCCCTATGCTCTGGACCTATTGACAAGCTGCTGGTCTGGACCCCGCGCAGCGGA
TTGACAGTGACGATGCCCTCAACCACGACTTCTTCTGGTGGACCCCATGCCCTCGGACCTCAAGGGCAT
GCTGTCTACTCACTTGACGTCTATGTTTGAAGTACCTGGCACCGCCACGGCGGAAGGGCAGCCAGATCACC
CAGCAGTCCACCAACAGAGCAGAAATCCCGCCACCACCAACAGACGGAATTTGAACGTGTCTTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR205733 protein sequence
 Red=Cloning site Green=Tags(s)

MAKQYDSVECPFCEVTKYEKLAIGQGTGGEVFKAKHRQTGQKVALKKVLMENEKEGFPITALREIKIL
 QLLKHENVNLIIEICRTKASPYNRCKGSIYLVDFCEHDLAAGLLSNLVKFTLSEIKRVMQMLLNGLYYI
 HRNKILHRDMKAANVLI TRDGV LKLADFLARAFSLAKNSQPNRYTNRVTVLWYRPELLLLGERDYGPPI
 DLWGAGCIMAEMWTRSPIMQGNTEQHQLALISQLCGSITPEVWPNVDKYELFEKLELVKQGQKRKVKDRLK
 AYVRDPYALDLIDKLLVLDPAQRIDSDDALNHDFFWSDPMPSDLKGM LSTHLTSMFEYLAPPRRKGSGIT
 QQSTNQSRNPATTNQTEFERVF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_130860

ORF Size: 1119 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_130860.3](#)

RefSeq Size: 3389 bp

RefSeq ORF: 1119 bp

Locus ID: 107951

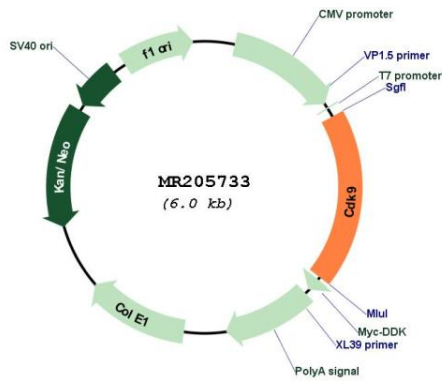
UniProt ID: [Q99J95](#)

Cytogenetics: 2 B

MW: 42.8 kDa

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]

Product images:



Circular map for MR205733