

Product datasheet for **MR208517**

Cdc73 (NM_145991) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cdc73 (NM_145991) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cdc73
Synonyms:	8430414L16Rik; C81219; C130030P16Rik; Hrpt2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR208517 representing NM_145991
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGACGTGCTCAGCGTCTCGCAGTACAACATCCAGAAGAAGGAGATCGTGGTCAAGGGGGATG
 AAGTGATCTTCGGGAGTTCTCCTGGCCCAAGAATGTGAAGACCAACTATGTAGTTTGGGGACCGGAAA
 GGAAGGCCAACCCAGAGAGTACTACACATTGGATTCTATCTTATTTCTCCTTAATAATGTGCACCTTTCG
 CATCCTGTTTATGTCCGGCGTGCAGTACTGAAAAATTCCTGTGGTTAGAAGACCCGACCGAAAAGATC
 TACTTGGATATCTCAATGGGGAAGCATCAACATCAGCAAGCATAGACAGGAGTGCCTTGGAAAATAGG
 TCTTCAGCGGTCTACTCAAGTCAAAGAGCTGCAGATGAAGTTTTAGCAGAAGCAAAGAAACCACGGATT
 GAGGATGAAGAGTGTGTGCGCTTGATAAAGAGAGATTGGCAGCTCGTTTGAAGGCCATAAAGAAGGGA
 TCGTGCAGACTGAGCAGATTAGGTCTTTGTCTGAAGCCATGTCAGTGGAAAAATGCTGCAATCAAAGC
 CAAAATTATGGCTAAGAAAAGATCTACTATCAAGACTGATCTAGATGATGATATAACTGCCCTTAAACAG
 AGGAGTTTTGTGGATGCTGAGGTAGATGTGACCAGAGATATTGTCAGCAGAGAGAGAGTGTGGAGGACAA
 GAACAACATTTTTACAGAGCACAGGAAAGAATTTTTCAAAGAATTTTTGCAATCTTCAATCTGTAAA
 AGCCAGAGAAGAAGTTCGTGCCCTGAACAACGGCCAGCTCCAAATGCAGCCCCCGTGGATCCTACATTG
 CGTACAAAACAGCCTATTCAGCTGCTTACAACAGATAGACCAAGAAAGATTCAAAGGCAAGAAGAAA
 CGGAAGGCTTTAAGATCGATACTATGGGCACCTACCATGGCATGACACTGAAATCTGTAACGGAAGGTGC
 ATCTGCTCGTAAGACTCAAACCTCTGCAGCCAGCCTGTACCTAGACCAGTGTCTCAAGCCAGACCCCC
 CCAAATCAGAAGAAAGGTCACGGACACCCATTATTATTCTGCAGTACCCTTTTAATAACTA
 TGCTTAATGCAAAAAGACCTTCTACAGGATCTGAAATTTGCCATCAGATGAGAAGAAGAAACAGGGTTG
 TCACAGAGAAAATGAAACACTAATACAGAGAAGAAAGACCAGATGCAACCAAGGGGCACAGCAATTAGT
 GTCACAGTACCTTACAGAGTAGTAGACCAGCCCTGAACTTATGCCTCAAGACTGGGATCGAGTTGTGG
 CTGTTTTTGTACAAGTCTGCTTGGCAATCAAAGGTTGGCCATGGCTTCTCCCTGATGGATCACCAGT
 TGACATATTTGCGAAAATTAAGCCTTCCATCTCAAGTATGATGAAGTTCGTCTAGATCCAAATGTTCAA
 AAGTGGGATGTAAACAGTATTAGAATCAGCTATCATAAACGTCACTTGGATAGACCAGTTTTCTTACGTT
 TCTGGAAACATTGGATAGATACATGGTAAAGCATAAATCCCCTTGAGATTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR208517 representing NM_145991
 Red=Cloning site Green=Tags(s)

MADVLSVLRQYNIQKKEIVVKGDEIVFGEFSWPKNVKNYVVWGTGKEGQPREYYTLDSILFLNNVHLS
 HPVYVRRRAATENIPVRRPDRKDLLGYLNGEASTSASIDRSAPLEIGLQRSTQVKRAAEVLAEAKKPRI
 EDEECVRLDKERLAARLEGHKEGIVQTEQIRSLSEAMSVEKIAAIKAKIMAKKRSTIKTDLDDITALKQ
 RSFVDAEVDVTRDIVSRERVRTRTTILQSTGKNFSKNIFAILQSVKAREEGRAPEQRPAAPNAAPVDTL
 RTKQPIPAAYNRYDQERFKGKEETEGFKIDTMGTYHGMLKSVTEGASARKTQTPAAQPVRPVSQARPP
 PNQKKSRTPIIIIPAATSLITMLNAKDLLQDLKFPVSPDEKKKQGCQRENETLIQRRKQMQPGGTAIS
 VTPYRVDQPLKMPQDWRVAVFVQGPWQFKGWPWLLPDGSPVDIFAKIKAFHLKYDEVRLDPNVQ
 KWDVTVLELSYHKRHLDRPVFLRFWETLDRYMKHKSHLRF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

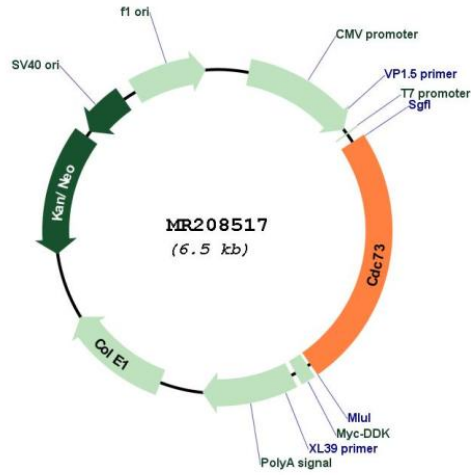
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN:	NM_145991
ORF Size:	1593 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:	<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:	NM_145991.2
RefSeq Size:	2692 bp
RefSeq ORF:	1596 bp
Locus ID:	214498
UniProt ID:	Q8JZM7
Cytogenetics:	1 62.52 cM
MW:	61 kDa

Gene Summary:

Tumor suppressor probably involved in transcriptional and post-transcriptional control pathways. May be involved in cell cycle progression through the regulation of cyclin D1/PRAD1 expression. Component of the PAF1 complex (PAF1C) which has multiple functions during transcription by RNA polymerase II and is implicated in regulation of development and maintenance of embryonic stem cell pluripotency. PAF1C associates with RNA polymerase II through interaction with POLR2A CTD non-phosphorylated and 'Ser-2'- and 'Ser-5'-phosphorylated forms and is involved in transcriptional elongation, acting both independently and synergistically with TCEA1 and in cooperation with the DSIF complex and HTATSF1. PAF1C is required for transcription of Hox and Wnt target genes. PAF1C is involved in hematopoiesis and stimulates transcriptional activity of KMT2A/MLL1. PAF1C is involved in histone modifications such as ubiquitination of histone H2B and methylation on histone H3 'Lys-4' (H3K4me3). PAF1C recruits the RNF20/40 E3 ubiquitin-protein ligase complex and the E2 enzyme UBE2A or UBE2B to chromatin which mediate monoubiquitination of 'Lys-120' of histone H2B (H2BK120ub1); UB2A/B-mediated H2B ubiquitination is proposed to be coupled to transcription. PAF1C is involved in mRNA 3' end formation probably through association with cleavage and poly(A) factors. Connects PAF1C with the cleavage and polyadenylation specificity factor (CPSF) complex and the cleavage stimulation factor (CSTF) complex, and with Wnt signaling. Involved in polyadenylation of mRNA precursors (By similarity). [UniProtKB/Swiss-Prot Function]