

Product datasheet for **RC232991**

MELK (NM_001256690) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256690) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MELK
Synonyms:	HPK38
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC232991 representing NM_001256690
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATGAACCTCTCAAATATTATGAATTACATGAACTATTGGGACAGTACTGCCCTGGAGGAGAGCTGT
 TTGACTATATAATTTCCAGGATCGCCTGTCAGAAGAGGAGACCCGGGTTGTCTTCCGTCAGATAGTATC
 TGCTGTTGCTTATGTGCACAGCCAGGGCTATGCTCACAGGGACCTCAAGCCAGAAAATTTGCTGTTTGT
 GAATATCATAAATTAAGCTGATTGACTTTGGTCTCTGTGCAAAACCCAAGGTAACAAGGATTACCATC
 TACAGACATGCTGTGGGAGTCTGGCTTATGCAGCACCTGAGTTAATAACAAGGCAAATCATATCTGGATC
 AGAGGCAGATGTTGGAGCATGGGCATACTGTTATATGTTCTTATGTGTGGATTCTACCATTTGATGAT
 GATAATGTAATGGCTTTATAACAAGAAGATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCCCA
 GTAGCATTCTGCTTCTTCAACAAATGCTGCAGGTGGACCCAAAGAAACGGATTTCTATGAAAATCTATT
 GAACCATCCCTGGATCATGCAAGATTACAACATCCTGTTGAGTGGCAAAGCAAGATCCTTTTATTCAC
 CTCGATGATGATTGCGTAACAGAACTTTCTGTACATCACAGAAACAACAGGCAAAACAATGGAGGATTTAA
 TTTCACTGTGGCAGTATGATCACCTCACGGCTACCTATCTTCTGCTTCTAGCCAAGAAGGCTCGGGGAAA
 ACCAGTTCGTTTAAAGGCTTTCTTCTTCTCCTGTGGACAAGCCAGTGCTACCCCATTCACAGACATCAAG
 TCAAAATAATTGGAGTCTGGAAGATGTGACCCGAAGTGATAAAAATATGTGGCGGATTAATAGACTATG
 ATGGTGTGAAGATGATTATCAACAGGTGCTGCTACTCCCCGAACATCACAGTTTACCAAGTACTGGAC
 AGAATCAAATGGGGTGAATCTAAATCATTAACTCCAGCCTTATGCAGAACACCTGCAAAATAATTAAG
 AACAAAGAAAATGTATATACTCCTAAGTCTGCTGTAAGAATGAAGAGTACTTTATGTTTCTGAGCCAA
 AGACTCCAGTTAATAAGAACCAGCATAAGAGAGAAAATCTCACTACGCCAAATCGTTACACTACACCTC
 AAAAGCTAGAAACCAGTGCCTGAAAGAAAACCTCAATTAATAATACCAGTAAATTAACAGGAACAGACAAG
 TTAATGACAGGTGTCATTAGCCCTGAGAGGCGGTGCCGCTCAGTGAATTGGATCTCAACCAAGCACATA
 TGGAGGAGACTCCAAAAAGAAAGGGAGCCAAAGTGTGGGAGCCTTGAAGGGGGTTGGATAAGGTTAT
 CACTGTGCTCACCAGGAGCAAAAGGAAGGGTCTGCCAGAGACGGGCCAGAAGACTAAAGCTTCACTAT
 AACGTGACTACAACACTAGATTAGTGAATCCAGATCAACTGTTGAATGAAATAATGTCTATTCTTCAAAGA
 AGCATGTTGACTTTGTACAAAAGGGTTACACTGAAGTGTCAAACACAGTCAGATTTTGGGAAAGTGAC
 AATGCAATTTGAATTAGAAGTGTCCAGCTTCAAAAACCCGATGTGGTGGTATCAGGAGGCAGCGGCTT
 AAGGGCGATGCCTGGGTTACAAAAGATTAGTGAAGACATCCTATCTAGCTGCAAGGTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC232991 representing NM_001256690
 Red=Cloning site Green=Tags(s)

MMNFSNIMNYMKLLGQYCPGGELFDYIIISQDRLSEETRIVVFRQIVSAVAVVHSQGYAHRDLKPENLLFD
 EYHKLKLIIDFGLCAKPKGNKYHLQTCCGSLAYAAPELIQKSYLGSEADVWSMGILLVLMCGFLPFDD
 DNVMLYKIMRGKYDVPKWLSPSSILLQMLQVDPKKRISMKNLLNHPWIMQDYNYPVEWQSKNPFIIH
 LDDDCVTELSVHHRNNRQTMEDLISLWQYDHLTATYLLLLAKKARGKPVRLRLSSFSCGQASATPFIDIK
 SNNWSLEDVTASDKNYVAGLIDYDWCEDDLSTGAATPRTSQFTKYWTESNGVESLTPALCRTPANKLK
 NKENVYTPKSAVKNEEYFMFPEPKTPVKNQHKREILTTPNRYTTPSKARNQCLKETPIKIPVNSTGTDK
 LMTGVISPERRCRSVLDLNAHMEETPKRKGAKEVFGSLERGLDKVITVLTRSKRKSARDGPRRLKLHY
 NVTTTRLVNPQDLLNEIMSILPKKHVDFVQKGYTLKQCTQSDFGKVTMQFELEVCQLQKPDVVGIRRQL
 KGDWVYKRLVEDILSSCKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

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_001256690.1 , NP_001243619.1
RefSeq Size:	2283 bp
RefSeq ORF:	1743 bp
Locus ID:	9833
UniProt ID:	Q14680
Cytogenetics:	9p13.2
Protein Families:	Druggable Genome, Protein Kinase
MW:	67 kDa
Gene Summary:	Serine/threonine-protein kinase involved in various processes such as cell cycle regulation, self-renewal of stem cells, apoptosis and splicing regulation. Has a broad substrate specificity; phosphorylates BCL2L14, CDC25B, MAP3K5/ASK1 and ZNF622. Acts as an activator of apoptosis by phosphorylating and activating MAP3K5/ASK1. Acts as a regulator of cell cycle, notably by mediating phosphorylation of CDC25B, promoting localization of CDC25B to the centrosome and the spindle poles during mitosis. Plays a key role in cell proliferation and carcinogenesis. Required for proliferation of embryonic and postnatal multipotent neural progenitors. Phosphorylates and inhibits BCL2L14, possibly leading to affect mammary carcinogenesis by mediating inhibition of the pro-apoptotic function of BCL2L14. Also involved in the inhibition of spliceosome assembly during mitosis by phosphorylating ZNF622, thereby contributing to its redirection to the nucleus. May also play a role in primitive hematopoiesis.[UniProtKB/Swiss-Prot Function]