

Product datasheet for **RC233011**

MELK (NM_001256685) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256685) 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:

>RC233011 representing NM_001256685
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAAGATTATGATGAACCTTCTCAAATATTATGAATTACATGAAACTATTGGGACAGGTGGCTTTGCAA
 AGGTCAAACCTTGCTGCCATATCCTTACTGGAGAGATGGTAGCTATAAAAATCATGGATAAAAACACACT
 AGGGAGTGATTTGCCCGGATCAAAACGGAGATTGAGGCCTTGAAGAACCTGAGACATCAGCATATATGT
 CAACTCTACCATGTGCTAGAGACAGCCAACAAAATATTTCATGGTCTTGGAGTACTGCCCTGGAGGAGAGC
 TGTTTGACTATATAATTTCCAGGATCGCTGTGAGAAGAGGAGACCCGGGTTGCTTCCGTCAGATAGT
 ATCTGCTGTTGCTTATGTGCACAGCCAGGGCTATGCTCACAGGGACCTCAAGCCAGAAAATTTGCTGTTT
 GATGAATATCATAAATTAAGCTGATTGACTTTGGTCTCTGTGCAAAACCAAGGTAACAAGGATTACC
 ATCTACAGACATGCTGTGGGAGTCTGGCTTATGCAGCACCTGAGTTAATACAAGGCAAATCATATCTTGG
 ATCAGAGGCAGATGTTTGGAGCATGGGCATACTGTTATATGTTCTTATGTGTGGATTTCTACCATTTGAT
 GATGATAATGTAATGGCTTTATACAAGAAGATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCTC
 CCAGTAGCATTCTGCTTCTTCAACAAATGCTGCAGGTGGACCCAAAGAAACGGATTTCTATGAAAAATCT
 ATTGAACCATCCCTGGATCATGCAAGATTACAACATCCTGTTGAGTGGCAAAGCAAGAATCCTTTTATT
 CACCTCGATGATGATTGCGTAACAGAACCTTCTGTACATCACAGAAAACAAGGCAAAACATGGAGGATT
 TAATTTCACTGTGGCAGTATGATCACCTCACGGCTACCTATCTTCTGCTTCTAGCCAAGAAGGCTCGGGG
 AAAACAGTTCGTTAAGGCTTCTTCTTCTCTCTGTGGACAAGCCAGTGTACCCCATTCACAGACATC
 AAGTTTACCAAGTACTGGACAGAATCAAATGGGGTGAATCTAAATCATTAACTCCAGCCTTATGCAGAA
 CACCTGCAAAATAAATTAAGAACAAGAAAATGTATATACTCTAAGTCTGTAAAGAATGAAGAGTA
 CTTTATGTTTCCGAGCCAAAGACTCCAGTTAATAAGAACCAGCATAAGAGAGAAAATACTACTACGCCA
 AATCGTTACACTACACCCTCAAAAGCTAGAAAACAGTGCCTGAAAGAACTCCAATTAATAATACCAGTAA
 ATTCAACAGGAACAGACAAGTTAATGACAGGTGCTATTAGCCCTGAGAGGCGGTGCCCTCAGTGGAAAT
 GGATCTCAACCAAGCACATATGGAGGAGACTCCAAAAAGAAAGGAGCCAAAGTGTGGGAGCCTTGAA
 AGGGGTTGGATAAGGTTATCACTGTGCTCACCAGGAGCAAAAGGAGGGTCTGCCAGAGACGGGCCCA
 GAAGACTAAAGCTTCACTATAACGTGACTACAAC TAGATTAGTGAATCCAGATCAACTGTTGAATGAAAT
 AATGTCTATTCTCCAAGAAGCATGTTGACTTTGTACAAAAGGGTTATACACTGAAGTGTCAAACACAG
 TCAGATTTTGGAAAGTGACAATGCAATTTGAATTAGAAGTGTGCCAGCTTCAAAAACCCGATGTGGTGG
 GTATCAGGAGGCAGCGGCTTAAGGGCGATGCCTGGGTTACAAAAGATTAGTGGAAGACATCCTATCTAG
 CTGCAAGGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC233011 representing NM_001256685
 Red=Cloning site Green=Tags(s)

MKDYDELLKYELHETIGTGGFAKVKLACHILTGEMVAIKIMDKNTLGSDLPRIKTEIEALKNLRHQHIC
 QLYHVLETANKIFMVLEYCPGGELFDYIISQDRLSEETRVRVFRQIVSAVAYVHSQGYAHRDLKPENLLF
 DEYHKLLKIDFGLCAKPKGNKDYHLQTCGSLAYAAPELIQGKSYLGSEADVWSMGILLVYLMCGFLPFD
 DDNVMALYKKIMRGKYDVPKWLSPSSILLQMLQVDPKKRISMKNLLNHPWIMQDYNYPVEWQSKNPF
 HLDDDCVTELSVHHRNNRQTMEDLISLWQYDHLTATYLLLLAKKARGKPVRLRLSSFSCGQASATPFTDI
 KFTKYWTESNGVESKSLTPALCRTPANKLNKENVYTPKSAVKNEEYFMFPEPKTPVNKNQHKREILTTP
 NRYTTPSKARNQCLKETPIKIPVNSTGTDKLMTGVI SPERRCRSVELDLNQAHMEETPKRKGAKVFGSLE
 RGLDKVITVLTRSKRKGSAARDGPRRLKLHYNVTTTRLVNPDLQLEIMSILPKKHVDFVQKGYTLKCQTQ
 SDFGKVTMQFELEVCQLQKPDVVGIRRRQLKGDWVYKRLVEDILSSCKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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_001256685.1 , NP_001243614.1
RefSeq Size:	2363 bp
RefSeq ORF:	1833 bp
Locus ID:	9833
UniProt ID:	Q14680
Cytogenetics:	9p13.2
Protein Families:	Druggable Genome, Protein Kinase
MW:	70.6 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]