

Product datasheet for **RC232983**

MELK (NM_001256691) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256691) 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:

>RC232983 representing NM_001256691
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGATGAACTTCTCAAATATTATGAATTACATGAAACTATTGGGACAGAGTGATTTGCCCCGGATCAAAA
 CGGAGATTGAGGCTTGAAGAACCTGAGACATCAGCATATATGTCAACTCTACCATGTGCTAGAGACAGC
 CAACAAAATATTCATGGTCTTGAGGAAAATTTGCTGTTGATGAATATCATAAATTAAGCTGATTGAC
 TTTGGTCTCTGTGCAAAACCCAAGGTAACAAGGATTACCATCTACAGACATGCTGTGGGAGTCTGGCTT
 ATGCAGCACCTGAGTTAATACAAGGCAATCATATCTTGGATCAGAGGCAGATGTTGGAGCATGGGCAT
 ACTGTTATATGTTCTTATGTGTGGATTTCTACCATTTGATGATGATAATGTAATGGCTTTATAACAAGAAG
 ATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCTCCAGTAGCATTCTGCTTCTCAACAAATGC
 TGCAGGTGGACCAAGAAACCGGATTTCTATGAAAATCTATTGAACCATCCCTGGATCATGCAAGATTA
 CAACTATCCTGTTGAGTGGCAAAGCAAGAATCCTTTTATTCACCTCGATGATGATTGCGTAACAGAAGTT
 TCTGTACATCACAGAAAACAGGCAAAACAATGGAGGATTAATTTCACTGTGGCAGTATGATCACCTCA
 CGGCTACCTATCTTCTGCTTCTAGCCAAGAAGGCTCGGGGAAAACCAAGTTCGTTAAGGCTTTCTCTTT
 CTCTGTGGACAAGCCAGTGCTACCCCATTCACAGACATCAAGTCAAATAATTGGAGTCTGGAAGATGTG
 ACCGCAAGTGATAAAAATATGTGGCGGGATTAATAGACTATGATTGGTGTGAAGATGATTTATCAACAG
 GTGCTGCTACTCCCCGAACATCACAGTTTACCAAGTACTGGACAGAATCAAATGGGGTGGAACTAAATC
 ATTAECTCCAGCCTTATGCAGAACACCTGCAAAATAAATAAGAAACAAAGAAAATGTATATACTCCTAAG
 TCTGCTGTAAGAATGAAGAGTACTTTATGTTTCTGAGCCAAAGACTCCAGTTAATAAGAACCAGCATA
 AGAGAGAAAATACTCACTACGCCAAATGTTACACTACCCCTCAAAGCTAGAAAACCGCTGCTGCAAGA
 AACTCCAATTAATAACAGTAAATTCACAGGAACAGACAAGTTAATGACAGGTGTCATTAGCCCTGAG
 AGGCGGTGCCGCTCAGTGGAAATGGATCTCAACCAAGCACATATGGAGGAGACTCAAAAAGAAAGGGAG
 CCAAAGTGTGGGAGCCTTGAAGGGGGTTGGATAAGGTTATCACTGTGCTCACCAGGAGCAAAAGGAA
 GGGTTCTGCCAGAGACGGGCCAGAAAGACTAAAGCTTCACTATAACGTGACTACAAGTAGATTAGTGAAT
 CCAGATCAACTGTTGAATGAAATAATGTCTATTCTTCAAAGAAGCATGTTGACTTTGTACAAAAGGTT
 ATACACTGAAGTGTCAAACACAGTCAGATTTTGGGAAAGTGACAATGCAATTTGAATTAGAAGTGTGCCA
 GCTTCAAAAACCCGATGTGGTGGGTATCAGGAGGCAGCGGCTTAAGGGCGATGCCTGGGTTACAAAAGA
 TTAGTGAAGACATCCTATCTAGCTGCAAGGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC232983 representing NM_001256691
 Red=Cloning site Green=Tags(s)

MMNFSNIMNYMKLLGQSDLPRIKTEIEALKNLRHQHICQLYHVLETANKIFMVLEENLLFDEYHKLKLI
 FGLCAKPKGNKDYHLQTCGSLAYAPELIQKSYLGSEADVSMGILLVYLMCGFLPFDDDNVMAKYK
 IMRGKYDVPKWLSPSSILLQMLQVDPKKRISMKNLLNHPWIMQDYNYPVEWQSKNPF IHLDDCVTEL
 SVHHRNNRQTMEDLISLWQYDHLTATYLLLLAKKARGKPVRLRLSSFSCGQASATPFTDIKSNWSLEDV
 TASDKNYVAGLIDYDWCEDDLSTGAATPRTSQFTKYWTESNGVESKSLTPALCRTPANKLKNKENVYTPK
 SAVKNEEYFMFPEPKTPVNKNQHKREIL TTPNRYTTPSKARNQCLKETPIKIPVNSTGTDKLMGTGVSPE
 RRCRSVELDLNQAHEETPKRKGAKVFGSLERGLDKVITVL TRSKRKGSAARDGPRRLKLHYNVTTTRLVN
 PDQLLNEIMSILPKKHVDFVQKGYTLKQQTQSDFGKVTMQFELEVCQLQKPDVVGIRRQRLKGDWVYKR
 LVEDILSSCKV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-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_001256691.1 , NP_001243620.1
RefSeq Size:	2256 bp
RefSeq ORF:	1716 bp
Locus ID:	9833
Cytogenetics:	9p13.2
Protein Families:	Druggable Genome, Protein Kinase
MW:	66.1 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]