

## Product datasheet for **RC232990**

### **MELK (NM\_001256688) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256688) 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:**

>RC232990 representing NM\_001256688  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAAAGATTATGATGAACCTTCTCAAATATTATGAATTACATGAAACTATTGGGACAGGTGGCTTTGCAA  
 AGGTCAAACCTTGCTGCCATATCCTTACTGGAGAGATGGTAGCTATAAAAATCATGGATAAAAACACACT  
 AGGGAGTGATTTGCCCGGATCAAAACGGAGATTGAGGCCTTGAAGAACCTGAGACATCAGCATATATGT  
 CAACTCTACCATGTGCTAGAGACAGCCAACAAAATATTTCATGGTCTTGAGGGTAACAAGGATTACCATC  
 TACAGACATGCTGTGGGAGTCTGGCTTATGCAGCACCTGAGTAAACAAGGCAAATCATATCTGGATC  
 AGAGGCAGATGTTGGAGCATGGGCATACTGTTATATGTTCTTATGTGTGGATTCTACCATTTGATGAT  
 GATAATGTAATGGCTTTATAACAAGAGATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCTCCA  
 GTAGCATTCTGCTTCTTCAACAAATGCTGCAGGTGGACCCAAAGAACGGATTTCTATGAAAATCTATT  
 GAACCATCCCTGGATCATGCAAGATTACAACATCCTGTTGAGTGGCAAAGCAAGATCCTTTTATTCAC  
 CTCGATGATGATTGCGTAACAGAACTTTCTGTACATCACAGAAACAACAGGCAAACAATGGAGGATTTAA  
 TTTCACTGTGGCAGTATGATCACCTCACGGCTACCTATCTTCTGCTTCTAGCCAAGAAGGCTCGGGGAAA  
 ACCAGTTCGTTTAAAGCTTTCTTCTTCTCTCTGTGGACAAGCCAGTGCTACCCCATTCACAGACATCAAG  
 TCAAATAATTGGAGTCTGGAAGATGTGACCCGAAGTGATAAAAATATGTGGCGGATTAATAGACTATG  
 ATGGTGTGAAGATGATTATCAACAGGTGCTGCTACTCCCCGAACATCACAGTTTACCAAGTACTGGAC  
 AGAATCAAATGGGGTGAATCTAAATCATTAACTCCAGCCTTATGCAGAACACCTGCAAAATAATTAAG  
 AACAAAGAAAATGTATATACTCCTAAGTCTGCTGTAAGAATGAAGAGTACTTTATGTTTCTGAGCCAA  
 AGACTCCAGTTAATAAGAACCAGCATAAGAGAGAAAATCTCACTACGCCAAATCGTTACACTACACCTC  
 AAAAGCTAGAAACCAGTGCCTGAAAGAACTCCAATTAATAATACCAGTAAATTAACAGGAACAGACAAG  
 TTAATGACAGGTGTCATTAGCCCTGAGAGGCGGTGCCGCTCAGTGAATTGGATCTCAACCAAGCACATA  
 TGGAGGAGACTCCAAAAAGAAAGGGAGCCAAAGTGTGGGAGCCTTGAAGGGGGTTGGATAAGGTTAT  
 CACTGTGCTCACCAGGAGCAAAAGGAAGGGTCTGCCAGAGACGGGCCAGAAGACTAAAGCTTCACTAT  
 AACGTGACTACAACACTAGATTAGTGAATCCAGATCAACTGTTGAATGAAATAATGTCTATTCTTCAAAGA  
 AGCATGTTGACTTTGTACAAAAGGGTTACACTGAAGTGTCAAACACAGTCAGATTTTGGGAAAGTGAC  
 AATGCAATTTGAATTAGAAGTGTCCAGCTTCAAAAACCCGATGTGGTGGTATCAGGAGGCAGCGGCTT  
 AAGGGCGATGCCTGGGTTACAAAAGATTAGTGAAGACATCCTATCTAGCTGCAAGTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC232990 representing NM\_001256688  
 Red=Cloning site Green=Tags(s)

MKDYDELLKYYELHETIGTGGFAKVKLACHILTGEMVAIKIMDKNTLGSDDLPRIKTEIEALKNLRHQHIC  
 QLYHVLETANKIFMVLEGNKDYHLQTCCGSLAYAPELIQGKSYLGSEADVWSMGILLVLMCGFLPFDD  
 DNVMALYKKIMRGKYDVPKWLSPSSILLQMLQVDPKKRISMKNLLNHPWIMQDYNYPVEWQSKNPFIH  
 LDDDCVTELSVHHRNNRQTMEDLISLWQYDHLTATYLLLLAKKARGKPVRLRLSSFSCGQASATPFDDIK  
 SNNWSLEDVTASDKNYVAGLIDYDWCEDDLSTGAATPRTSQFTKYWTESNGVESLTPALCRTPANKLK  
 NKENVYTPKSAVKNEEYFMFPEPKTPVNKNQHKREILTTPNRYTTPSKARNQCLKETPIKIPVNSTGTDK  
 LMTGVISPERRCRSVELDLNQAHEETPKRKGAKEVFGSLERGLDKVITVLTRSKRKSARDGPRRLKLHY  
 NVTTTTRLVNPQDLLNEIMSILPKKHVDFVQKGYTLKCQTQSDFGKVTMQFELEVCQLQKPDVVGIRRQL  
 KGDWVYKRLVEDILSSCKV

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

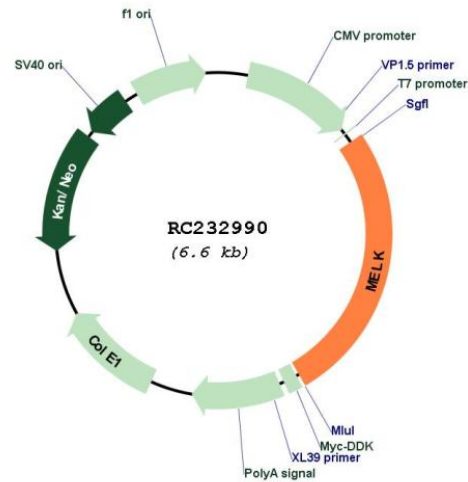
SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


ACCN: NM\_001256688

ORF Size: 1740 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001256688.1</a> , <a href="#">NP_001243617.1</a>
<b>RefSeq Size:</b>	2273 bp
<b>RefSeq ORF:</b>	1743 bp
<b>Locus ID:</b>	9833
<b>UniProt ID:</b>	<a href="#">Q14680</a>
<b>Cytogenetics:</b>	9p13.2
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>MW:</b>	66.8 kDa
<b>Gene Summary:</b>	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]