

## Product datasheet for **SC114824**

### MELK (NM\_014791) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_014791) Human Untagged Clone
Tag:	Tag Free
Symbol:	MELK
Synonyms:	HPK38
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

>OriGene ORF sequence for NM\_014791 edited  
 ATGAAAGATTATGATGAACCTTCTCAAATATTATGAATTACATGAAACTATTGGGACAGGT  
 GGCTTTGCAAAGGTCAAACCTGCCTGCCATATCCTTACTGGAGAGATGGTAGCTATAAAA  
 ATCATGGATAAAAAACACTAGGGAGTGATTTGCCCGGATCAAACGGAGATTGAGGCC  
 TTGAAGAACCTGAGACATCAGCATATATGTCAACTCTACCATGTGCTAGAGACAGCCAAC  
 AAAATATTCATGGTTCTTGAGTACTGCCCTGGAGGAGAGCTGTTGACTATATAATTTCC  
 CAGGATCGCCTGTCAGAAGAGGAGACCCGGGTTGTCTCCGTGAGATAGTATCTGCTGTT  
 GCTTATGTGCACAGCCAGGGCTATGCTCACAGGGACCTCAAGCCAGAAAATTTGCTGTTT  
 GATGAATATCATAAATTAAGCTGATTGACTTTGGTCTCTGTGCAAAACCAAGGTAAC  
 AAGGATTACCATCTACAGACATGCTGTGGGAGTCTGGCTTATGCAGCACCTGAGTTAATA  
 CAAGGCAAATCATATCTTGGATCAGAGGCAGATGTTTGGAGCATGGGCATACTGTTATAT  
 GTTCTTATGTGTGGATTCTACCATTTGATGATGATAATGTAATGGCTTTATAACAAGAAG  
 ATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCTCCAGTAGCATTCTGCTTCTT  
 CAACAAATGCTGCAGGTGACCCAAAGAAACGGATTTCTATGAAAATCTATTGAACCAT  
 CCCTGGATCATGCAAGATTACAACATCCTGTTGAGTGGCAAAGCAAGAATCCTTTTATT  
 CACCTCGATGATGATTGGTAACAGAACTTTCTGTACATCACAGAAAACAAGGCAAAACA  
 ATGGAGGATTTAATTTCACTGTGGCAGTATGATCACCTCACGGCTACCTATCTTCTGCTT  
 CTAGCCAAGAAGGCTCGGGGAAAACAGTTCGTTTAAAGCTTTCTTCTTCTCCTGTGGA  
 CAAGCCAGTGCTACCCATTACAGACATCAAGTCAAATAATTGGAGTCTGGAAGATGTG  
 ACCGCAAGTGATAAAAATATGTGGCGGGATTAATAGACTATGATTGGTGTGAAGATGAT  
 TTATCAACAGGTGCTGCTACTCCCCGAACATCACAGTTTACCAAGTACTGGACAGAATCA  
 AATGGGGTGGAAATCTAAATCATTAACTCCAGCCTTATGCAGAACACCTGCAAATAAATTA  
 AAGAACAAGAAAATGTATATACTCCTAAGTCTGCTGTAAGAATGAAGAGTACTTTTATG  
 TTTCTGAGCCAAAGACTCCAGTTAATAAGAACCAGCATAAGAGAGAAAATACTCACTACG  
 CAAATCGTTACACTACCCCTCAAAGCTAGAAACAGTGCCTGAAAGAACTCCAATT  
 AAAATACCAGTAAATTAACAGGAACAGACAAGTTAATGACAGGTGTCATTAGCCCTGAG  
 AGGCGGTGCCCTCAGTGGAAATGGATCTCAACCAAGCACATATGGAGGAGACTCCAAAA  
 AGAAAGGGAGCCAAAGTGTGGGAGCCTTGAAGGGGGTTGGATAAGGTTATCACTGTG  
 CTCACCAGGAGCAAAAGGAGGGTTCTGCCAGAGACGGGCCAGAAAGACTAAAGTTCAC  
 TATAATGTGACTACAACAGATTAGTGAATCCAGATCAACTGTTGAATGAATAATGTCT  
 ATCTTCCAAAGAAGCATGTTGACTTTGTACAAAAGGGTTATACACTGAAGTGTCAAACA  
 CAGTCAGATTTTGGGAAAGTGACAATGCAATTTGAATTAGAAGTGTGCCAGCTTCAAAA  
 CCCGATGTGGTGGTATCAGGAGGCAGCGGCTTAAAGGGCGATGCCTGGGTTTACAAAAGA  
 TTAGTGAAGACATCCTATCTAGCTGCAAGGTATAA

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_014791 unedited  
 TTTGTAATACGACTCACTATAGGGCGCCGCGAATTCGGCACGAGGGCCGCTCTCTCAG  
 GACAGCAGGCCCTGTCTTCTGTGCGGCGCCGCTCAGCCGTGCCCTCCGCCCTCAGGT  
 CAGTTCTCCCGCTGCCCGCCGAGTCGAGTTGATGGCTGGGGTCTGGGCTGTGCGGGG  
 CGCAGCGGCCAAACCCAGTTTGTCTCTGGCTCTCGGGAGACTGGAGGATTTATCGGAG  
 CCCCAGCTTTACCAGCCCTGTTCCCTGGATAAGATATTTGACCTTTCCGACCCGCGGT  
 TTCTTCTCCAATCTCGTCCGTTGCCAGGCTGGAGTGCAGTGGCGTGATCTCGGCTCAC  
 TGCAACCTCTGCCTCCTGCCTCAGCCTCCCAAGTCTTTTTCTAATTCAAAATAAATTG  
 CAAGAGGACTATGAAAGATTATGATGAACCTCTCAAATATTATGAATTACATGAAACTAT  
 TGGGACAGGTGGCTTTGCAAAGGTCAAACCTTGCCTGCCATATCCTTACTGGAGAGATGGT  
 AGCTATAAAAATCATGGATAAAAACACTAGGGAGTGATTTGCCCGGATCAAACGGGA  
 GATTGAGGCCTTGAAGAACCTGAGACATCAGCATATATGTCAACTCTACCATGTGCTAGA  
 GACAGCCAACAAAATATTCATGGTTCTTGAGTACTGCCCTGGNAGAGAGCTGTTTACTA  
 TATAAATTTCCAGGATCGCTGTGAGAAGAGACCCGGGTGCTTCCGTGAGATATATC  
 TGCTGTTGCTTATGTGCACAGCAAGGCTTTGCTCACAGGGACCTCAAGCAGAAAATTC  
 TGTTTGTGATATCATAAATAAAGCTGATGACTTTGGTCTTGTGCAAAACCAAGGTACAA  
 C

<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_014791 unedited GTTTTATTTTCAGTTAGNAATTACACATTACAAANAGACATAGTTAAGAGCTTACATTCAC ATATGGAAGTGAATCTAAGAAAGTCAACAATTATTAATATACAAAACCACATGATTA AAGACAGTAACATAATGACAGATGGGCTTGATTTAGATTCATACACAAAATAATATCTTT TGTAAAAACAAAGAGATATTGGTCTTAAGATAGCTTTAGAAAACAAGTTGGTAGTTC CAATGAACTTTAAATCAAAGCGATCATAACAGTCTTTATGTAGGCTGTATCACACCCAC ACTCATCCGGCAGGATGGAAGAATCCATCAATTATACCTTGCAGCTAGATAGGATGTCTT CCACTAATCTTTTGTAAACCCAGGCATCGCCCTTAAGCCGCTGCCTCCTGATACCCACCA CATCGGGTTTTTGAAGCTGGCACACTTCTAATTCAAATTGCATTGTCACTTTCCCAAAAT CTGACTGTGTTTGACACTTCAGTGTATAACCCTTTTGTACAAAGTCAACATGCTTCTTTG GAAGAATAGACATTATTTCAATCAACAGTTGATCTGGATTCACTAATCTAGTTGTAGTCA CATTATAGTGAACTTTAGTCTTCTGGGCCGCTCTGGCAGAACCCTTCTTTTGTTC TGGTGAGCACAGTGATTACCTTATCCAACCCCTTTAATGCTCCCAACCACTTTTGGTCC CTTTCTTTTTGAAGCCTTCTCATATGGGCCTTGGTTAAATCCAATCCCTGACCGGCCCC TCTTTTAGGGTAACGACCCCGTATTAACTCGCTTTCCTCGCCGATTTATCGGGTTTCA ATCGGGCGTTGTTAAGCAACGTCTTCTTCTCGAAGTGGTTCCGCTCACATTTTCGTCG CTCGTCTTCGTCTTTCTCTGGCCGTTATACACCGAGCTTGGCTCAGTATACACACTATTT TTTTCTACGTTGTTCCCGTTTACCTTTTCTCTCTCCCTTTTCCCTTAA
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_014791
<b>Insert Size:</b>	2700 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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>	<u><a href="#">NM_014791.2</a></u> , <u><a href="#">NP_055606.1</a></u>
<b>RefSeq Size:</b>	2501 bp
<b>RefSeq ORF:</b>	1956 bp
<b>Locus ID:</b>	9833
<b>UniProt ID:</b>	<u><a href="#">Q14680</a></u>
<b>Cytogenetics:</b>	9p13.2
<b>Domains:</b>	pkinese, TyrKc, KA1, S_TKc

**Protein Families:** Druggable Genome, Protein Kinase

**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]  
Transcript Variant: This variant (1) encodes the longest isoform (1).