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Product datasheet for RC232909

MELK (NM_001256692) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256692) 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

ORF Nucleotide Sequence:

>RC232909 representing NM_001256692
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTTCTTGAGGAAAATTTGCTGTTTGATGAATATCATAAATTAAAGCTGATTGACTTTGGTCTCTGTG
CAAAACCCAAGGGTAACAAGGATTACCATCTACAGACATGCTGTGGGAGTCTGGCTTATGCAGCACCTGA
GTTAATACAAGGCAAATCATATCTTGGATCAGAGGCAGATGTTTGGAGCATGGGCATACTGTTATATGTT
CTTATGTGTGGATTTCTACCATTTGATGATGATAATGTAATGGCTTTATACAAGAAGATTATGAGAGGAA
AATATGATGTTCCCAAGTGGCTCTCTCCCAGTAGCATTCTGCTTCTTCAACAAATGCTGCAGGTGGACCC
AAAGAAACGGATTTCTATGAAAAATCTATTGAACCATCCCTGGATCATGCAAGATTACAACTATCCTGTT
GAGTGGCAAAGCAAGAATCCTTTTATTCACCTCGATGATGATTGCGTAACAGAACTTTCTGTACATCACA
GAAACAACAGGCAAACAATGGAGGATTTAATTTCACTGTGGCAGTATGATCACCTCACGGCTACCTATCT
TCTGCTTCTAGCCAAGAAGGCTCGGGGAAAACCAGTTCGTTTAAGGCTTTCTTCTTTCTCCTGTGGACAA
GCCAGTGCTACCCCATTCACAGACATCAAGTCAAATAATTGGAGTCTGGAAGATGTGACCGCAAGTGATA
AAAATTATGTGGCGGGATTAATAGACTATGATTGGTGTGAAGATGATTTATCAACAGGTGCTGCTACTCC
CCGAACATCACAGTTTACCAAGTACTGGACAGAATCAAATGGGGTGGAATCTAAATCATTAACTCCAGCC
TTATGCAGAACACCTGCAAATAAATTAAAGAACAAAGAAAATGTATATACTCCTAAGTCTGCTGTAAAGA
ATGAAGAGTACTTTATGTTTCCTGAGCCAAAGACTCCAGTTAATAAGAACCAGCATAAGAGAGAAATACT
CACTACGCCAAATCGTTACACTACACCCTCAAAAGCTAGAAACCAGTGCCTGAAAGAAACTCCAATTAAA
ATACCAGTAAATTCAACAGGAACAGACAAGTTAATGACAGGTGTCATTAGCCCTGAGAGGCGGTGCCGCT
CAGTGGAATTGGATCTCAACCAAGCACATATGGAGGAGACTCCAAAAAGAAAGGGAGCCAAAGTGTTTGG
GAGCCTTGAAAGGGGGTTGGATAAGGTTATCACTGTGCTCACCAGGAGCAAAAGGAAGGGTTCTGCCAGA
GACGGGCCCAGAAGACTAAAGCTTCACTATAACGTGACTACAACTAGATTAGTGAATCCAGATCAACTGT
TGAATGAAATAATGTCTATTCTTCCAAAGAAGCATGTTGACTTTGTACAAAAGGGTTATACACTGAAGTG
TCAAACACAGTCAGATTTTGGGAAAGTGACAATGCAATTTGAATTAGAAGTGTGCCAGCTTCAAAAACCC
GATGTGGTGGGTATCAGGAGGCAGCGGCTTAAGGGCGATGCCTGGGTTTACAAAAGATTAGTGGAAGACA
TCCTATCTAGCTGCAAGGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

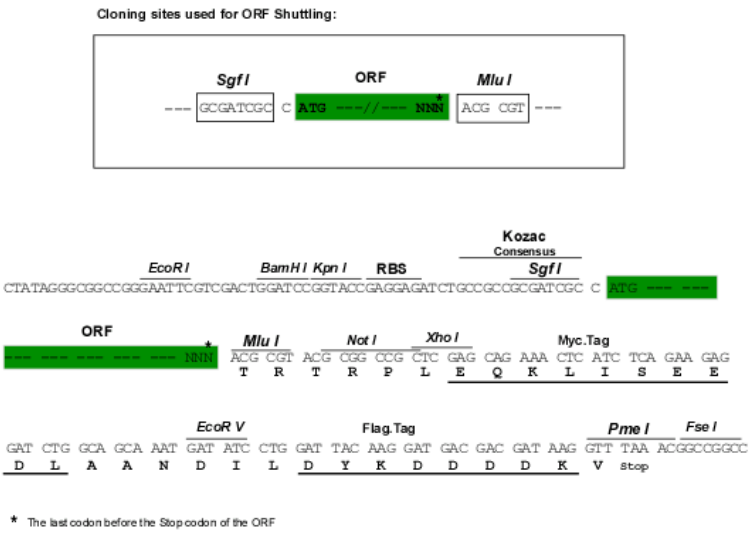
>RC232909 representing NM_001256692
Red=Cloning site Green=Tags(s)

MVLEENLLFDEYHKLKLIDFGLCAKPKGNKDYHLQTCCGSLAYAAPELIQGKSYLGSEADVWSMGILLYV
LMCGFLPFDDDNVMALYKKIMRGKYDVPKWLSPSSILLLQQMLQVDPKKRISMKNLLNHPWIMQDYNYPV
EWQSKNPFIHLDDDCVTELSVHHRNNRQTMEDLISLWQYDHLTATYLLLLAKKARGKPVRLRLSSFSCGQ
ASATPFTDIKSNNWSLEDVTASDKNYVAGLIDYDWCEDDLSTGAATPRTSQFTKYWTESNGVESKSLTPA
LCRTPANKLKNKENVYTPKSAVKNEEYFMFPEPKTPVNKNQHKREILTTPNRYTTPSKARNQCLKETPIK
IPVNSTGTDKLMTGVISPERRCRSVELDLNQAHMEETPKRKGAKVFGSLERGLDKVITVLTRSKRKGSAR
DGPRRLKLHYNVTTTRLVNPDQLLNEIMSILPKKHVDFVQKGYTLKCQTQSDFGKVTMQFELEVCQLQKP
DVVGIRRQRLKGDAWVYKRLVEDILSSCKV

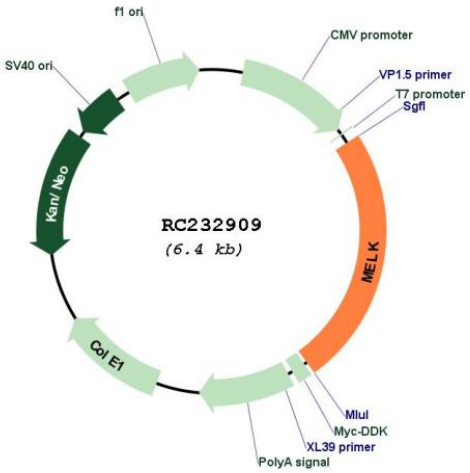
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001256692
ORF Size:	1560 bp
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:	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_001256692.1, NP_001243621.1
RefSeq Size:	2160 bp
RefSeq ORF:	1563 bp
Locus ID:	9833
UniProt ID:	Q14680
Cytogenetics:	9p13.2
Protein Families:	Druggable Genome, Protein Kinase
MW:	60 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]