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Product datasheet for RG232781

MELK (NM_001256693) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256693) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MELK
Synonyms:	HPK38
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>RG232781 representing NM_001256693
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCATACTGTTATATGTTCTTATGTGTGGATTTCTACCATTTGATGATGATAATGTAATGGCTTTAT
ACAAGAAGATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCTCCCAGTAGCATTCTGCTTCTTCA
ACAAATGCTGCAGGTGGACCCAAAGAAACGGATTTCTATGAAAAATCTATTGAACCATCCCTGGATCATG
CAAGATTACAACTATCCTGTTGAGTGGCAAAGCAAGAATCCTTTTATTCACCTCGATGATGATTGCGTAA
CAGAACTTTCTGTACATCACAGAAACAACAGGCAAACAATGGAGGATTTAATTTCACTGTGGCAGTATGA
TCACCTCACGGCTACCTATCTTCTGCTTCTAGCCAAGAAGGCTCGGGGAAAACCAGTTCGTTTAAGGCTT
TCTTCTTTCTCCTGTGGACAAGCCAGTGCTACCCCATTCACAGACATCAAGTCAAATAATTGGAGTCTGG
AAGATGTGACCGCAAGTGATAAAAATTATGTGGCGGGATTAATAGACTATGATTGGTGTGAAGATGATTT
ATCAACAGGTGCTGCTACTCCCCGAACATCACAGTTTACCAAGTACTGGACAGAATCAAATGGGGTGGAA
TCTAAATCATTAACTCCAGCCTTATGCAGAACACCTGCAAATAAATTAAAGAACAAAGAAAATGTATATA
CTCCTAAGTCTGCTGTAAAGAATGAAGAGTACTTTATGTTTCCTGAGCCAAAGACTCCAGTTAATAAGAA
CCAGCATAAGAGAGAAATACTCACTACGCCAAATCGTTACACTACACCCTCAAAAGCTAGAAACCAGTGC
CTGAAAGAAACTCCAATTAAAATACCAGTAAATTCAACAGGAACAGACAAGTTAATGACAGGTGTCATTA
GCCCTGAGAGGCGGTGCCGCTCAGTGGAATTGGATCTCAACCAAGCACATATGGAGGAGACTCCAAAAAG
AAAGGGAGCCAAAGTGTTTGGGAGCCTTGAAAGGGGGTTGGATAAGGTTATCACTGTGCTCACCAGGAGC
AAAAGGAAGGGTTCTGCCAGAGACGGGCCCAGAAGACTAAAGCTTCACTATAACGTGACTACAACTAGAT
TAGTGAATCCAGATCAACTGTTGAATGAAATAATGTCTATTCTTCCAAAGAAGCATGTTGACTTTGTACA
AAAGGGTTATACACTGAAGTGTCAAACACAGTCAGATTTTGGGAAAGTGACAATGCAATTTGAATTAGAA
GTGTGCCAGCTTCAAAAACCCGATGTGGTGGGTATCAGGAGGCAGCGGCTTAAGGGCGATGCCTGGGTTT
ACAAAAGATTAGTGGAAGACATCCTATCTAGCTGCAAGGTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

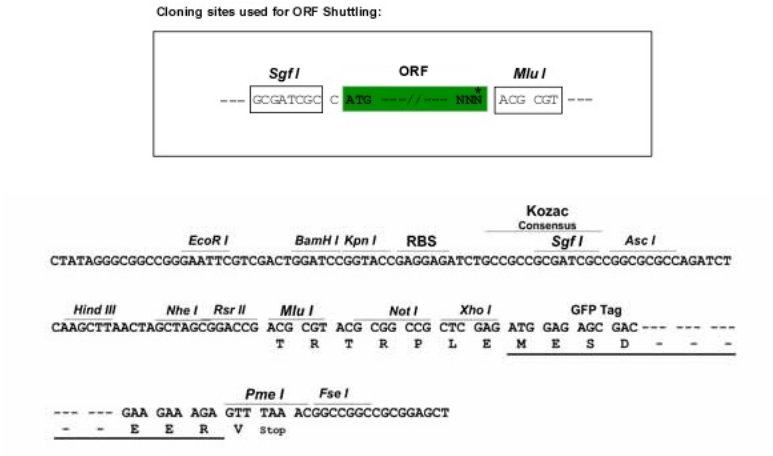
>RG232781 representing NM_001256693
Red=Cloning site Green=Tags(s)

MGILLYVLMCGFLPFDDDNVMALYKKIMRGKYDVPKWLSPSSILLLQQMLQVDPKKRISMKNLLNHPWIM
QDYNYPVEWQSKNPFIHLDDDCVTELSVHHRNNRQTMEDLISLWQYDHLTATYLLLLAKKARGKPVRLRL
SSFSCGQASATPFTDIKSNNWSLEDVTASDKNYVAGLIDYDWCEDDLSTGAATPRTSQFTKYWTESNGVE
SKSLTPALCRTPANKLKNKENVYTPKSAVKNEEYFMFPEPKTPVNKNQHKREILTTPNRYTTPSKARNQC
LKETPIKIPVNSTGTDKLMTGVISPERRCRSVELDLNQAHMEETPKRKGAKVFGSLERGLDKVITVLTRS
KRKGSARDGPRRLKLHYNVTTTRLVNPDQLLNEIMSILPKKHVDFVQKGYTLKCQTQSDFGKVTMQFELE
VCQLQKPDVVGIRRQRLKGDAWVYKRLVEDILSSCKV

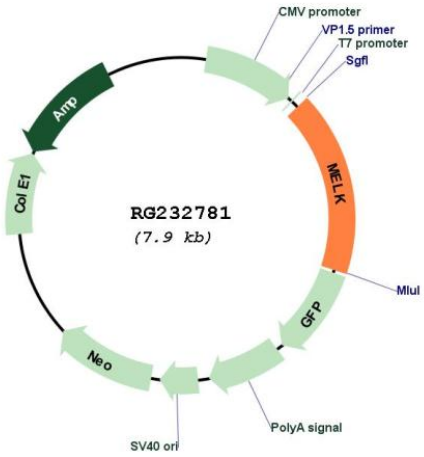
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001256693

ORF Size: 1371 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_001256693.1, NP_001243622.1
RefSeq Size:	2300 bp
RefSeq ORF:	1374 bp
Locus ID:	9833
UniProt ID:	Q14680
Cytogenetics:	9p13.2
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]