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Product datasheet for RG233019

MELK (NM_001256689) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MELK (NM_001256689) 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:

>RG233019 representing NM_001256689
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGATGAACTTCTCAAATATTATGAATTACATGAAACTATTGGGACAGAGTGATTTGCCCCGGATCAAAA
CGGAGATTGAGGCCTTGAAGAACCTGAGACATCAGCATATATGTCAACTCTACCATGTGCTAGAGACAGC
CAACAAAATATTCATGGTTCTTGAGTACTGCCCTGGAGGAGAGCTGTTTGACTATATAATTTCCCAGGAT
CGCCTGTCAGAAGAGGAGACCCGGGTTGTCTTCCGTCAGATAGTATCTGCTGTTGCTTATGTGCACAGCC
AGGGCTATGCTCACAGGGACCTCAAGCCAGAAAATTTGCTGTTTGATGAATATCATAAATTAAAGCTGAT
TGACTTTGGTCTCTGTGCAAAACCCAAGGGTAACAAGGATTACCATCTACAGACATGCTGTGGGAGTCTG
GCTTATGCAGCACCTGAGTTAATACAAGGCAAATCATATCTTGGATCAGAGGCAGATGTTTGGAGCATGG
GCATACTGTTATATGTTCTTATGTGTGGATTTCTACCATTTGATGATGATAATGTAATGGCTTTATACAA
GAAGATTATGAGAGGAAAATATGATGTTCCCAAGTGGCTCTCTCCCAGTAGCATTCTGCTTCTTCAACAA
ATGCTGCAGGTGGACCCAAAGAAACGGATTTCTATGAAAAATCTATTGAACCATCCCTGGATCATGCAAG
ATTACAACTATCCTGTTGAGTGGCAAAGCAAGAATCCTTTTATTCACCTCGATGATGATTGCGTAACAGA
ACTTTCTGTACATCACAGAAACAACAGGCAAACAATGGAGGATTTAATTTCACTGTGGCAGTATGATCAC
CTCACGGCTACCTATCTTCTGCTTCTAGCCAAGAAGGCTCGGGGAAAACCAGTTCGTTTAAGGCTTTCTT
CTTTCTCCTGTGGACAAGCCAGTGCTACCCCATTCACAGACATCAAGTCAAATAATTGGAGTCTGGAAGA
TGTGACCGCAAGTGATAAAAATTATGTGGCGGGATTAATAGACTATGATTGGTGTGAAGATGATTTATCA
ACAGGTGCTGCTACTCCCCGAACATCACAGTTTACCAAGTACTGGACAGAATCAAATGGGGTGGAATCTA
AATCATTAACTCCAGCCTTATGCAGAACACCTGCAAATAAATTAAAGAACAAAGAAAATGTATATACTCC
TAAGTCTGCTGTAAAGAATGAAGAGTACTTTATGTTTCCTGAGCCAAAGACTCCAGTTAATAAGAACCAG
CATAAGAGAGAAATACTCACTACGCCAAATCGTTACACTACACCCTCAAAAGCTAGAAACCAGTGCCTGA
AAGAAACTCCAATTAAAATACCAGTAAATTCAACAGGAACAGACAAGTTAATGACAGGTGTCATTAGCCC
TGAGAGGCGGTGCCGCTCAGTGGAATTGGATCTCAACCAAGCACATATGGAGGAGACTCCAAAAAGAAAG
GGAGCCAAAGTGTTTGGGAGCCTTGAAAGGGGGTTGGATAAGGTTATCACTGTGCTCACCAGGAGCAAAA
GGAAGGGTTCTGCCAGAGACGGGCCCAGAAGACTAAAGCTTCACTATAACGTGACTACAACTAGATTAGT
GAATCCAGATCAACTGTTGAATGAAATAATGTCTATTCTTCCAAAGAAGCATGTTGACTTTGTACAAAAG
GGTTATACACTGAAGTGTCAAACACAGTCAGATTTTGGGAAAGTGACAATGCAATTTGAATTAGAAGTGT
GCCAGCTTCAAAAACCCGATGTGGTGGGTATCAGGAGGCAGCGGCTTAAGGGCGATGCCTGGGTTTACAA
AAGATTAGTGGAAGACATCCTATCTAGCTGCAAGGTA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

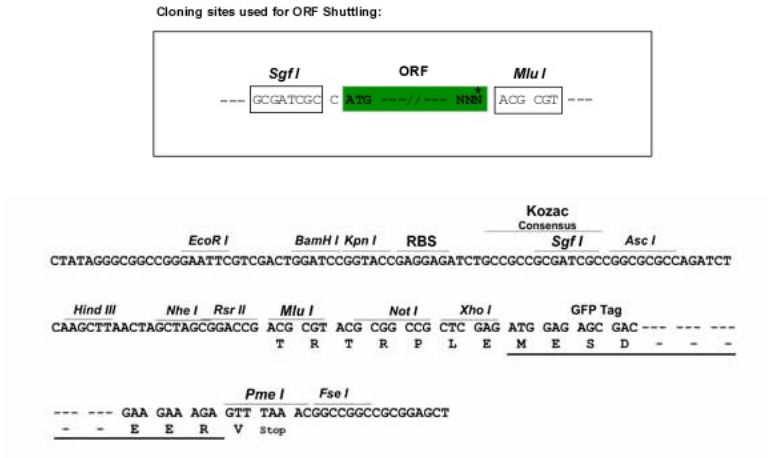
>RG233019 representing NM_001256689
Red=Cloning site Green=Tags(s)

MMNFSNIMNYMKLLGQSDLPRIKTEIEALKNLRHQHICQLYHVLETANKIFMVLEYCPGGELFDYIISQD
RLSEEETRVVFRQIVSAVAYVHSQGYAHRDLKPENLLFDEYHKLKLIDFGLCAKPKGNKDYHLQTCCGSL
AYAAPELIQGKSYLGSEADVWSMGILLYVLMCGFLPFDDDNVMALYKKIMRGKYDVPKWLSPSSILLLQQ
MLQVDPKKRISMKNLLNHPWIMQDYNYPVEWQSKNPFIHLDDDCVTELSVHHRNNRQTMEDLISLWQYDH
LTATYLLLLAKKARGKPVRLRLSSFSCGQASATPFTDIKSNNWSLEDVTASDKNYVAGLIDYDWCEDDLS
TGAATPRTSQFTKYWTESNGVESKSLTPALCRTPANKLKNKENVYTPKSAVKNEEYFMFPEPKTPVNKNQ
HKREILTTPNRYTTPSKARNQCLKETPIKIPVNSTGTDKLMTGVISPERRCRSVELDLNQAHMEETPKRK
GAKVFGSLERGLDKVITVLTRSKRKGSARDGPRRLKLHYNVTTTRLVNPDQLLNEIMSILPKKHVDFVQK
GYTLKCQTQSDFGKVTMQFELEVCQLQKPDVVGIRRQRLKGDAWVYKRLVEDILSSCKV

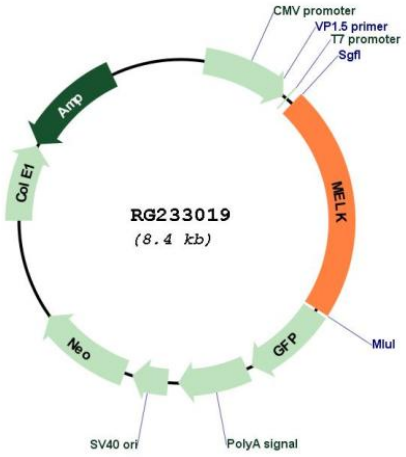
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001256689

ORF Size: 1857 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_001256689.1, NP_001243618.1
RefSeq Size:	2400 bp
RefSeq ORF:	1860 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]