

Product datasheet for MR216598

Pum1 (NM_030722) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Pum1 (NM_030722) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Pum1
Synonyms: AA517475; mKIAA0099; Pumm
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >MR216598 representing NM_030722
Red=Cloning site Blue=ORF Green=Tags(s)

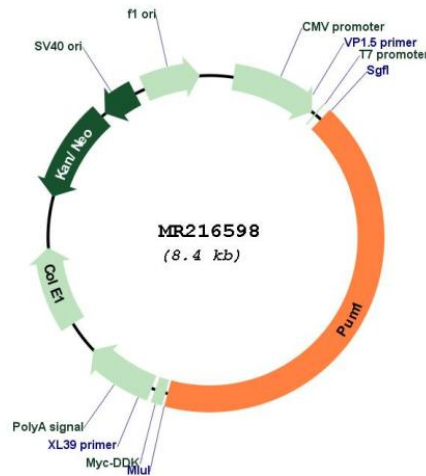
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Plasmid Map:


ACCN: NM_030722

ORF Size: 3558 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_030722.2](#), [NP_109647.2](#)

RefSeq Size: 5370 bp

RefSeq ORF: 3570 bp

Locus ID: 80912

UniProt ID: [Q80U78](#)

Cytogenetics: 4 D2.2

MW: 127.1 kDa

Gene Summary: Sequence-specific RNA-binding protein that acts as a post-transcriptional repressor by binding the 3' UTR of mRNA targets. Binds to an RNA consensus sequence, the Pumilio Response Element (PRE), 5'-UGUANAUA-3', that is related to the Nanos Response Element (NRE). Mediates post-transcriptional repression of transcripts via different mechanisms: acts via direct recruitment of the CCR4-POP2-NOT deadenylase leading to translational inhibition and mRNA degradation. Also mediates deadenylation-independent repression by promoting accessibility of miRNAs. Following growth factor stimulation, phosphorylated and binds to the 3' UTR of CDKN1B/p27 mRNA, inducing a local conformational change that exposes miRNA-binding sites, promoting association of miR-221 and miR-222, efficient suppression of CDKN1B/p27 expression, and rapid entry to the cell cycle (By similarity). Acts as a post-transcriptional repressor of E2F3 mRNAs by binding to its 3' UTR and facilitating miRNA regulation (By similarity). Represses a program of genes necessary to maintain genomic stability such as key mitotic, DNA repair and DNA replication factors. Its ability to repress those target mRNAs is regulated by the lncRNA NORAD (non-coding RNA activated by DNA damage) which, due to its high abundance and multitude of PUMILIO binding sites, is able to sequester a significant fraction of PUM1 and PUM2 in the cytoplasm (By similarity). Involved in neuronal functions by regulating ATXN1 mRNA levels: acts by binding to the 3' UTR of ATXN1 transcripts, leading to their down-regulation independently of the miRNA machinery (PubMed:25768905). In testis, acts as a post-transcriptional regulator of spermatogenesis by binding to the 3' UTR of mRNAs coding for regulators of p53/TP53 (PubMed:22342750). Involved in embryonic stem cell renewal by facilitating the exit from the ground state: acts by targeting mRNAs coding for naive pluripotency transcription factors and accelerates their down-regulation at the onset of differentiation (PubMed:24412312). Binds specifically to miRNA MIR199A precursor, with PUM2, regulates miRNA MIR199A expression at a postranscriptional level (By similarity).[UniProtKB/Swiss-Prot Function]