

## Product datasheet for **MR216613L2V**

### **Pum1 (NM\_001159604) Mouse Tagged ORF Clone Lentiviral Particle**

#### **Product data:**

Product Type:	Lentiviral Particles
Product Name:	Pum1 (NM_001159604) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Pum1
Synonyms:	AA517475; mKIAA0099; Pumm
Mammalian Cell Selection:	None
Vector:	pLenti-C-mGFP (PS100071)
Tag:	mGFP
ACCN:	NM_001159604
ORF Size:	3564 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR216613).
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. <a href="#">More info</a>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	<a href="#">NM_001159604.1</a>
RefSeq Size:	5367 bp
RefSeq ORF:	3567 bp
Locus ID:	80912
UniProt ID:	<a href="#">Q80U78</a>
Cytogenetics:	4 D2.2



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**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]