

## Product datasheet for **MC223421**

### Pum2 (NM\_001160221) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Pum2 (NM\_001160221) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Pum2  
**Synonyms:** 5730503J23Rik; Pumm2  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC223421 representing NM\_001160221  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGAATCATGATTTTCAAGCTCTTGCATTAGAATCTCGGGGAATGGGAGAGCTTTTGCCTACCAAAAAGT  
TTTGGAACTGATGATTCAACAAAAGATGGACAAAAGGCATATTTCTGGGGATGATGAATGGAGAGA  
GACTGCATGGGAACTTCTCATCATTCAATGTCCAGCCTATTATGGTGCAGAGAAGATCTGGACAGAGT  
TTTCATGGAAACAGTGAAGTAAATGCAATTCTTTCTCCAGCTCAGAAAAGTGGAGGCCTTGGTGTGAGCA  
TGGTAGAATATGTATTAAGTTCTCTCCTGCTGATAAAATTGGATTCTCGATTTAGGAAGGGAACCTTTGG  
TACTAGAGATGCTGAAACAGATGGACCTGAGAAAGGAGATCAAAAAGGCAAGGCTTCTCCATTTGAGGAG  
GACCAAAACAGAGATCTTAAACAAGATGATGAGGACTCTAAAAATAATGGCAGAGGTTTGCCAAATGGAA  
TGGATGCCGATTGCAAAGATTTAATCGCACTCCTGGAAGTCGCCAAGCCTCTCCAAGTGAAGTAGTTGA  
GCGCCTTGGCCCTAGTACTAATCCCCAGAAGGATTGGGCCCTCTCCTAATCCGACAGCGAATAAACCA  
CTTGTTGAAGAATTTTCAAACCTGAAACTCAGAATCTGGATGCAATGGACCAAGTTGGTCTGGATTCT  
TACAGTTTGACTATCCTGGTAATCAGTACCCATGGATTCTTCAGGAGCTACTGTAGGCCTTTTGTACTA  
CAATCCCAACAGCAGCTCTTTCAGAGGACTAGTGCCTAACAGTTCAGCAGTTAACTGCAGCTCAGCAG  
CAGCAGTATGCATTAGCAGCAGCTCAGCAGCCACATATAGCTGGTGTATTCTCAGCAGGCCTTGCTCCAG  
CTGCATTTGTGCCAAATCCATATATTATTAGTGTCTCCTCCAGGGACTGACCCGTATACTGCAGCAGG  
ATTGGCTGCAGCAGCAACATTAGCAGGTCCAGCAGTGGTTCACCTCAGTATTACGGTGTCCATGGGGA  
GTGTATCCAGCAATTTATTTAGCAACAAGCTGCAGCTGCGGCAAGCAACACAGCAACAGCAAGCAG  
CATCACAAGCTCAGCCTGGACAGCAGCAGGTTCTTCGCTCTGGAGCAGGTGAGCCTCTATTACTCCAAG  
TCAGGGCCAACAAGGGCAGCAAGCAGAGTCACTGCAGCAGCTGCAAACCAACTTTGGCTTTTGGTCAG  
AGTCTTGCTGCAGGCATGCCAGGCTATCAAGTACTAGCTCCAAGTGCCTATTATGATCAGACTGGTGCCT  
TAGTGGTTGGCCCGGAGCAAGAACTGGCTTGGAGCTCAGTACGATTAAATGGCTCCAACACCTGTCTT  
AATAAGTTCAACAGCAGCACAAGCTGCAGCAGCAGCAGCAGCAGCTGGAGGAACTGCAAATAGTCTTACA  
GGCAGCACAAATGGTCTGTTTCGGCAATTGGCACTCAGCCACCACAGCAGCAGCAGCAGCAGCAGCAAC



CAAGCTAACCTGCAGTCTAATTCATTTTATGGGAGCAGCTCTTTGACTAACAGCTCCCAGAGCAGCTC  
 TTTATTCTCTCATGGACCTGGCCAACTGGAAGTGCCTCTTTGGCTTTGGAAGTGGTAGCTCTTTAGGA  
 GCTGCTATAGGCTCAGCTCTCAGTGGATTTGGCTCATCAGTTGGCAGTTCTGCAAGTAGTAGGCCAAA  
 GGAGAGAGTCTCTACTAGCTCTGACTTGTACAAAAGATCTAGTAGCAGCCTAGCACCCATAGGGCA  
 ACCATTTACAATAGTCTGGGATTTTCTCCTCTCCAAGTCCAATAGGCATGCCTCTGCCAAGCCAACT  
 CCAGGACATTCACCTACGCCACCGCCATCACTTTCATCACATGGATCCTCATCCAGTTTGCATTTAGGAG  
 GACTGACAAAACGGTAGTGGTCGGTATATCTCTGCAGCACCTGGAGCAGAAGCAAAGTACCGAAGTCTTC  
 AAGCATTCCAGTCTATTTAGCTCCAGCAGCCAGCTCTTCTCCTTCTCGGCTCCGCTATAATAGATCT  
 GACATCATGCCCTCCGGCCGAGTAGGTTATTGGAAGATTTAGGAACAACCGCTTCCCCAACCTTCAGC  
 TCAGAGACTTAATTGGACATATAGTCGAGTTTTCTCAAGACCAGCATGGTTCCAGATTCATACAGAAAA  
 GCTAGAGAGAGCTACTCCAGCTGAGCGACAAAATAGTATTTAATGAAATCTACAGGCAGCCTATCAATTA  
 ATGACAGATGTTTTGGAACTATGTTATACAGAAATTTTTGAGTTTGGAAATTTGGATCAGAAATTAG  
 CCCTGGCTACTCGTATTCGTGGTCATGTTCTACCATTAGCCTGCAGATGTATGGCTGCCGTGTTATTCA  
 AAAGCGTTAGAATCTATTTCTCTGATCAGCAGAGTGAATGGTTAAGGAACTAGATGGCCATGTA  
 AAATGTGTGAAAGATCAAAATGGAACCATGTTGTACAGAAATGCATTGAATGTGTTTCAGCCACAGT  
 TGCAAGTTCATCATCGATGCTTTCAAAGGACAAGTATTTGTGCTTTCAACCATCCTTATGGCTGCAGAGT  
 CATTTCAGCGTATCTTAGAGCACTGCACGGCAGAGCAGACCTTACCCATCTTAGAAGAATTCACCAACAC  
 ACAGAACAGTTGGTACAGGATCAGTATGGCAATTATGTTATTCAGCATGTACTGGAACATGGTCGACCTG  
 AAGACAAGAGCAAAATGTTTTCCGAAATCAGAGGAAAGTCTTAGCCCTGAGTCAACACAAAATTTGCCAG  
 CAATGTAGTAGAAAAGTGTGTTACTCATGCCTCCCGTCTGAGAGAGCTTTACTGATTGATGAGGCTGC  
 TGTCAGAAATGATGGTCTCACAGTGCCTTATACACCATGATGAAGGATCAGTATGCCAATATGTGGTTC  
 AGAAGATGATTGATGGCTGAGCCTGCGCAGAGAAAGATAATCATGCACAAGATTCGACCTCATATTAC  
 TACTCTTCGAAAATACACATATGGGAAGCATATACTGGCCAAGTTGAAAAATACTATCTGAAAAACAGC  
 CCAGATCTAGGGCCAATTGGAGGACCACCAATGGGATGCTGTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:**

Sgfl-MluI

**ACCN:**

NM\_001160221

**Insert Size:**

3195 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\_001160221.1, NP\_001153693.1

**RefSeq Size:**

6120 bp

RefSeq ORF: 3195 bp

Locus ID: 80913

Cytogenetics: 12 A1.1

**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. Acts as a post-transcriptional repressor of E2F3 mRNAs by binding to its 3' UTR and facilitating miRNA regulation. Plays a role in cytoplasmic sensing of viral infection. 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. May regulate DCUN1D3 mRNA levels. May support proliferation and self-renewal of stem cells. Binds specifically to miRNA MIR199A precursor, with PUM1, regulates miRNA MIR199A expression at a posttranscriptional level (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (4) differs in the 5' UTR, and uses an alternate in-frame donor splice site in the 3' coding region compared to variant 1. This results in an isoform (2) lacking 2 aa compared to isoform 1. Variants 3 and 4 encode the same isoform.