

Product datasheet for TP516613

Pum1 (NM_001159604) Mouse Recombinant Protein

Product data:

OriGene Technologies, Inc.

9620 Medical Center Drive, Ste 200 Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com CN: techsupport@origene.cn

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse pumilio RNA-binding family member 1 (Pum1), with C- terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T



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	lone >MR216613 representing NM_001159604
or AA Sequence:	Red=Cloning site Green=Tags(s)
	MSVACVLKRKAVLWQDSFSPHLKHHPQEPANPNMPVVLTSGTGSQAQPQPAANQALAAGTHSSPVPG SIG
	VAGRSQDDAMVDYFFQRQHGEQLGGGGGGGGGGYNTSKHRWPTGDNIHAEHQVRSMDELNHDFQAL LEGR
	AMGEQLLPGKKFWETDESSKDGPKGIFLGDQWRDSAWGTSDHSVSQPIMVQRRPGQSFHVNSEVNSVI SP
	RSESGGLGVSMVEYVLSSSPGDSCLRKGGFGPRDADSDENDKGEKKNKGTFDGDKLGDLKEEGDVMDK N
	GLPVQNGIDADVKDFSRTPGNCQNSANEVDLLGPNQNGSEGLAQLTSTNGAKPVEDFSNMESQSVPLD PM
	EHVGMEPLQFDYSGTQVPVDSAAATVGLFDYNSQQQLFQRPNALAVQQLTAAQQQQYALAAAHQPHI GLA
	PAAFVPNPYIISAAPPGTDPYTAGLAAAATLGPAVVPHQYYGVTPWGVYPASLFQQQAAAAAAATNSATQ QSAPQAQQQQQVLRGGASQRPLTPNQNQQGQQTDPLVAAAAVNSALAFGQGLAAGMPGYPVLAPA AYYD
	QTGALVVNAGARNGLGAPVRLVAPAPVIISSSAAQAAVAAAAASANGAAGGLAGTTNGPFRPLGTQQPQ QPQQQPSNNLASSSFYGNNSLSSNSQSSSLFSQGSAQPANTSLGFGSSSSLGATLGSALGGFGTAVANSN TGSGSRRDSLTGSSDLYKRTSSSLAPIGHSFYSSLSYSSSPGPVGMPLPSQGPGHSQTPPPSLSSHGSSS SLNLGGLTNGSGRYISAAPGAEAKYRSASSASSLFSPSSTLFSSSRLRYGMSDVMPSGRSRLLEDFRNNR YPNLQLREIAGHIMEFSQDQHGSRFIQLKLERATAAERQLVFNEILQAAYQLMVDVFGNYVIQKFFEFGS HEQKLALAERIRGHVLSLALQMYGCRVIQKALEFIPSDQQVINEMVRELDGHVLKCVKDQNGNHVVQKCI ECVQPQSLQFIIDAFKGQVFALSTHPYGCRVIQRILEHCLPDQTLPILEELHQHTEQLVQDQYGNYVIQH VLEHGRPEDKSKIVAEIRGNVLVLSQHKFASNVVEKCVTHASRTERAVLIDEVCTMNDGPHSALYTMMKD QYANYVVQKMIDVAEPGQRKIVMHKIRPHIATLRKYTYGKHILAKLEKYYMKNGVDLGPICGPPNGII
	TRTRPLEQKLISEEDLAANDILDYKDDDDKV
ag:	C-MYC/DDK
redicted MW:	127 kDa
oncentration:	>0.05 µg/µL as determined by microplate BCA method
urity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
uffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
lote:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
	Store at -80°C after receiving vials.
itorage:	Stable for 12 months from the date of receipt of the product under proper storage and
torage: tability:	handling conditions. Avoid repeated freeze-thaw cycles.

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	Pum1 (NM_001159604) Mouse Recombinant Protein – TP516613
Locus ID:	80912
UniProt ID:	<u>Q80U78</u>
RefSeq Size:	5367
Cytogenetics:	4 D2.2
RefSeq ORF:	3564
Synonyms	44517475° mKI440099° Pumm

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 miRNAbinding 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 posttranscriptional 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 IncRNA 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]

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Product images:



Purified recombinant protein Pum1 was analyzed by SDS-PAGE gel and Coomossie Blue Staining.

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