

Product datasheet for **MC227602**

Prpf19 (NM_001253844) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Prpf19 (NM_001253844) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Prpf19
Synonyms:	AA617263; AL024362; D19Wsu55e; NMP200; Prp19; PSO4; Snev
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC227602 representing NM_001253844 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGCACAGCTTCACTCTTCGCCAGCAACTGCAGACAACCCGCCAGGAGCTGTCCCATGCTCTGTACC
AACACGATGCTGCCTGCCGAGTCATTGCCCGGCTCACAAAGAGGTCAGTCTGCTCGAGAAGCTCTGGC
TACTCTGAAACCACAGGCTGGGCTTATTGTACCTCAGGCTGTGCCAAGCTCACAGCCAGTGTGTGGGT
GCAGGAGAGCCCATGGATTTGGGTGAGCTGGTGGGAATGACCCCTGAGATTATCCAGAAGCTTCAAGACA
AGGCTACTGTGCTAACCCAGGAGCGTAAGAAGAGAGGAAAGACTGTCCCGAGGAGCTGGTAAACCTGA
AGAGCTCAGCAAGTACCGGCAGGTGGCATCCCATGTGGGTCTACACAGTGTAGCATTCCCTGGGATTCTC
GCTCTGGACCTGTGTCCCTCAGACACCAACAAGATTCTCACTGGTGGGGCAGATAAAAAATGTTGTTGCT
TTGATAAGAGTACTGAGCAAATATTGGCCACTCTCAAAGGCCATACCAAGAAGGTCACCAGTGTGGTGT
TCATCCTTCTCAGGAAGTGGTGTTCGCGTCCCCTGATGCTACTATCAGGATTTGGTCAGTCCCAGAAC
ACTTCTCGGTACAGGTTGTTCCGGCCCATGAGAGTGCAGTGACAGGCCTCAGCCTCCATGCTACTGGAG
ACTATCTCCTGAGCTCCTCTGATGATCAGTACTGGGCTTCTCTGACATCCAGACAGGGCGTGTGCTCAC
TAAGGTGACAGATGAGACCTCCGGCTGCTCTTACCTGTGCACAGTCCACCCTGATGGGCTCATCTTT
GGAACAGGAACCATGGACTCCCAGATCAAGATCTGGGACTTGAAGGAGCGTACCAATGTGGCCAACCTCC
CTGGCCATTCTGGCCCCATTACCAGCATCGCCTTCTCTGAGAATGGTACTACCTGGCCACAGCAGCTGA
TGATTCCTCAGTCAAGCTCTGGGACTTACGCAAGTTGAAGAATTCAAGCATTGCAGCTGGACAACAAC
TTTGAGGTGAAGTCACTAATCTTTGACCAGAGCGGTACCTACCTGGCGCTTGGGGGTACAGATGTCCAGA
TCTACATCTGAAACAATGGACAGAGATTCTTCACTTTACAGAGCACAGTGGCCTGACCACTGGAGTGGC
CTTTGGACACCATGCCAAGTTCATCGTTCACCTGGCATGGACAGGAGCCTCAAATTCTACAGTCTG**TAG**

ACGGTACGGCGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Restriction Sites:	Sgfl-Mlul
ACCN:	NM_001253844
Insert Size:	1260 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).
OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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:	<ol style="list-style-type: none"> 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:	<u>NM_001253844.1, NP_001240773.1</u>
RefSeq Size:	5811 bp
RefSeq ORF:	1260 bp
Locus ID:	28000
UniProt ID:	<u>Q99KP6</u>
Cytogenetics:	19 7.33 cM

Gene Summary:

Isoform 1: Ubiquitin-protein ligase which is a core component of several complexes mainly involved in pre-mRNA splicing and DNA repair. Required for pre-mRNA splicing as component of the spliceosome. Core component of the PRP19C/Prp19 complex/NTC/Nineteen complex which is part of the spliceosome and participates in its assembly, its remodeling and is required for its activity. During assembly of the spliceosome, mediates 'Lys-63'-linked polyubiquitination of the U4 spliceosomal protein PRPF3. Ubiquitination of PRPF3 allows its recognition by the U5 component PRPF8 and stabilizes the U4/U5/U6 tri-snRNP spliceosomal complex. Recruited to RNA polymerase II C-terminal domain (CTD) and the pre-mRNA, it may also couple the transcriptional and spliceosomal machineries. The XAB2 complex, which contains PRPF19, is also involved in pre-mRNA splicing, transcription and transcription-coupled repair. Beside its role in pre-mRNA splicing PRPF19, as part of the PRP19-CDC5L complex, plays a role in the DNA damage response/DDR. It is recruited to the sites of DNA damage by the RPA complex where PRPF19 directly ubiquitinates RPA1 and RPA2. 'Lys-63'-linked polyubiquitination of the RPA complex allows the recruitment of the ATR-ATRIP complex and the activation of ATR, a master regulator of the DNA damage response. May also play a role in DNA double-strand break (DSB) repair by recruiting the repair factor SETMAR to altered DNA. As part of the PSO4 complex may also be involved in the DNA interstrand cross-links/ICLs repair process. In addition, may also mediate 'Lys-48'-linked polyubiquitination of substrates and play a role in proteasomal degradation (PubMed:17349974). May play a role in the biogenesis of lipid droplets (PubMed:17118936). May play a role in neural differentiation possibly through its function as part of the spliceosome (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) differs in the 5' UTR, lacks a portion of the 5' coding region, and initiates translation at a downstream start codon, compared to variant 1. The encoded isoform (3) has a distinct N-terminus and is shorter than isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.