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Product datasheet for MC223643

Upf1 (NM_001122829) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Upf1 (NM_001122829) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Upf1
Synonyms:	B430202H16Rik; NORF1; PNORF-1; Rent1; Upflp
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC223643 representing NM_001122829 Red=Cloning site Blue=ORF Orange=Stop codon TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGAGTGTGGAGGCGTACGGCCCCAGCTCGCAAACACTCACCTTCTTGGACACTGAGGAGGCCGAGCTGC TCGGCGCCGACACCCAGGGCTCCGAGTTCGAATTCACCGACTTCACCCTTCCCAGCCAGACGCAGACGCC CCCCGGCGGCCCCGGCGGCGCGGGAGGCCCGGGCGGAGCGGGCGCAGGCGGCGCGGCCGGCCAGCTCGAC GCACAAGTTGGACCAGAGGGCATCTTGCAAAATGGGGCTGTGGATGACAGTGTGGCCAAGACCAGCCAGC TGCTAGCTGAGCTGAACTTCGAGGAAGATGAAGAGGACACATACTACACTAAGGACCTCCCAGTCCACGC CTGCAGTTACTGTGGAATCCATGATCCTGCCTGCGTGGTTTACTGTAATACCAGCAAGAAGTGGTTCTGC AATGGCCGAGGAAATACTTCTGGCAGCCACATTGTGAATCACCTCGTGAGGGCAAAATGCAAGGAAGTGA CGCTGCACAAGGACGGGCCTCTGGGCGAGACCGTGCTGGAGTGCTACAACTGTGGCTGCCGCAACGTCTT CCTGCTGGGCTTCATCCCTGCGAAGGCCGACTCTGTGGTGGTGCTGTTGTGCAGGCAGCCCTGTGCCAGC CAGAGCAGCCTGAAGGACATCAACTGGGACAGCTCACAGTGGCAGCCCCTAATCCAGGACCGGTGCTTTC TGTCATGGCTGGTCAAGATTCCCTCTGAGCAGGAGCAGCTGCGAGCACGGCAGATCACGGCACAGCAGAT CAACAAGCTGGAAGAGCTCTGGAAGGAAAATCCTTCAGCCACTCTGGAGGACCTGGAGAAGCCAGGCGTA GACGAGGAGCCACAGCACGTGCTCCTGCGTTACGAGGATGCTTACCAGTACCAGAACATCTTCGGGCCAC TGGTCAAGCTGGAGGCTGACTATGACAAGAAGTTGAAGGAGTCACAGACTCAAGATAACATCACGGTCAG GTGGGACCTGGGCCTTAACAAGAAGAGAATCGCCTTCTTCACTTTGCCCAAGACTGACTCTGGTAATGAG GATTTAGTCATAATTTGGTTAAGAGACATGCGGCTCATGCAGGGTGATGAGATCTGTCTGCGGTACAAAG GGGATCTGGCGCCCCTGTGGAAGGGGATTGGCCACGTCATCAAGGTTCCTGATAATTATGGTGATGAGAT TGCTATTGAGCTCCGCAGCAGCGTGGGTGCCCCTGTGGAAGTGACCCACAACTTCCAAGTGGATTTTGTG TGGAAGTCAACCTCTTTTGATAGGATGCAGAGTGCACTGAAGACCTTCGCTGTGGACGAGACCTCTGTGT CAGGGTATATTTACCACAAGCTGCTGGGCCACGAGGTGGAGGATGTGGTCATCAAGTGCCAGCTGCCAAA GCGCTTCACAGCTCAGGGGCTCCCTGACCTCAACCACTCTCAGGTGTATGCTGTGAAGACCGTGCTGCAG AGACCACTCAGCCTCATCCAGGGCCCTCCAGGCACAGGCAAGACTGTGACATCAGCCACTATTGTCTACC

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ACCTTGCTCGGCAGGGCAATGGGCCTGTACTGGTTTGTGCTCCAAGTAACATCGCTGTGGACCAGCTCAC
AGAGAAGATCCACCAGACAGGACTGAAGGTCGTACGCCTCTGTGCCAAGAGCCGTGAGGCCATTGACTCC
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CACGTGGCTGCCATGAACATCCCTATTCCCTTCAACTTGGTCATGCCTCCCATGCCGCCACCTGGCTACT
TCGGACAGGCCAACGGGCCGGCAGCTGGTCGGGGCACCCCAAAAACCAAGACTGGCCGTGGGGGCCGCCA
GAAGAACCGCTTTGGGCTTCCTGGGCCCAGCCAGACCACCCTTCCCAACAGCCAGGCCAGCCAGGACGTG
GCCTCCCAGCCCTTTTCACAGGGTGCCCTCACACAGGGTTACGTGTCCATGAGCCAGCCCTCTCAGATGA
GCCAGCCTGGCCTCTCCCAGCCAGAACTGTCCCAGGACAGCTACCTCGGTGATGAGTTTAAATCACAGAT
TGACGTGGCACTCTCACAAGACTCCACATACCAGGGAGAGCGGGCATACCAGCACGGCGGGGTCACCGGG
CTGTCCCAGTACTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001122829

Insert Size: 3375 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_001122829.1, NP_001116301.1
RefSeq Size:	4631 bp
RefSeq ORF:	3375 bp
Locus ID:	19704
UniProt ID:	Q9EPU0
Cytogenetics:	8 34.15 cM
Gene Summary:	RNA-dependent helicase and ATPase required for nonsense-mediated decay (NMD) of mRNAs containing premature stop codons. Is recruited to mRNAs upon translation termination and undergoes a cycle of phosphorylation and dephosphorylation; its phosphorylation appears to be a key step in NMD. Recruited by release factors to stalled ribosomes together with the SMG1C protein kinase complex to form the transient SURF (SMG1-UPF1-eRF1-eRF3) complex. In EJC-dependent NMD, the SURF complex associates with the exon junction complex (EJC) (located 50-55 or more nucleotides downstream from the termination codon) through UPF2 and allows the formation of an UPF1-UPF2-UPF3 surveillance complex which is believed to activate NMD. Phosphorylated UPF1 is recognized by EST1B/SMG5, SMG6 and SMG7 which are thought to provide a link to the mRNA degradation machinery involving exonucleolytic and endonucleolytic pathways, and to serve as adapters to protein phosphatase 2A (PP2A), thereby triggering UPF1 dephosphorylation. UPF1 can also activate NMD without UPF2 or UPF3, and in the absence of the NMD-enhancing downstream EJC indicative for alternative NMD pathways. Plays a role in replication-dependent histone mRNA degradation at the end of phase S; the function is independent of UPF2. For the recognition of premature termination codons (PTC) and initiation of NMD a competitive interaction between UPF1 and PABPC1 with the ribosome-bound release factors is proposed. The ATPase activity of UPF1 is required for disassembly of mRNPs undergoing NMD (By similarity). Essential for embryonic viability.[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (a).