

## Product datasheet for **MR231353**

### Usp33 (NM\_001252486) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Usp33 (NM_001252486) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Usp33
Synonyms:	9830169D19Rik; AA409780; Vdu1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR231353 representing NM\_001252486  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGACGACTTTTCGAAATCATTGTCACATTTGGATTGAGTTGGTGAATAACGAAAGAGGACTTGATAC  
 AGAAATCTCTCGGCGCTTGTGAGGACTGTAAAGTCAGAGGACCAACCTGTGGCGTGCCTGGAGAATAG  
 GTGCTCCTATGTTGGCTGCGGGGAGTCGCAAGTGACCACAGCACCATACTCGCAGGAGACAAAGCAT  
 TATCTAACTGTGAACCTCACCCTCTTCGAGTATGGTGTATGCTTGCAGCAAAGAAGTATTTTTGGATA  
 GAAATTAGGAACTCCTCCTTACCTCATGTAAGACAGCCTCAACAAACACAAGAAAACAGTGTCCA  
 GGATTTTAAAATCCCAGTAATCCAGCATTGAAAACCCCATGGTTGCTGTGCTGAAGACTGGATATA  
 GAAGTGGAGAGGACGAGCTGAAGGCTAGAGGCTGACAGGTTTAAAAACATTGAAATACTTGTT  
 ATATGAACGCGGCTGCAGGCTCTTTCTAACTGCCACCTTTGACACAGTCTTTCTTGATTGTGGAGG  
 ACTGGCTAGAACAGATAAGAAACCAGCAATTTGTAAAAGTTATCTCAAATAATGACCGAGTTGTGGCAC  
 AAGAGCAGGCCAGGATCTGTTGTCCGGCTAATCTGTTCCAAGGAATTAAGTGTAAATCCAATTTTC  
 GAGGTTATTCTCAGCAGGATGCCAGGAATTCCTTCGCTGTCTAATGGACCTGCTTCATGAGGAGCTGAA  
 GGAGCAGGTATGGAAATGGAGGAAGAGCCTCAACACTAACTTCTGAGGAGACGGTGGAGGAAGAGAAG  
 AGCCAGTCAGATGTGGATTTTCAGTCGTGCGAGTCTTGTAGCAGCAGCGAAGAGCAGAAAATGAGAGTG  
 GCTCCAAGGCTTTCTGAGGACAGCAATGAGACCACCATGCTCATCCAGGACGAGGATGACCTGGAGAT  
 GGCCAAAGACTGGCAGAAAGAGAAGGTGTGCAATAAGTCAACAAGGCAATGCCGATGTAGAATGGAC  
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 TTTCCACCAAAATTAGCACCCATGTTTCTTCCCCTGGAAGGCCCTCGATCTTCAGCCATTTCTTGCAAA  
 GGACAGCCAGCTCAGATTGTGACATATGATCTCCTGTACGTATCTGTCAACATGGGACTGCAAGTAGT  
 GGGCACTACATTCCTACTGCCGAAACAATTTAAATAACCTGTGGTATGAGTTTGTGACAGAGCGTCA  
 CTGAAGTTTCAGAGTCCACTGTACAGAATGCCGAGGCCTACGTCCTTTTCTACAGGAAGAGCAGTGAAGA  
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 ACCTGCCAAATTGAGTTAGAGAAGATTGAAAAACGAAGAAAAACCGAATTGGAAATTTTTATTTCGGCTCA  
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 AAATGTGGCAGTGTGATGCTCAAGCAAGGAGCAGACTCTGGTCAAATTTCAAGAAACATGGAATTTCC  
 TGCAGTCTATATGGTGGGGGCTGAAGTTATCCTCCGACCTCCAGTTGTTTATGTTGACCTGATGT  
 ACTCCAAGCAGAGGAAAAGATTGAAGTAGAAACTCGCTCTTTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231353 representing NM\_001252486  
 Red=Cloning site Green=Tags(s)

MTTFRNHCPHLDSVGEITKEDLIQKSLGACQDCKVRGPNLWACLENRCSYVGCGESQVDHSTIHSQETKH  
 YLTVNL TTLRVWCYACSKVEFLDRKLGTPPSLPHVRQPQTQENSVDKIPSNPALKTPMVAVEDLDI  
 EVEEDELKARGLTGLKNIGNTCYMNAALQALSNCPLTQFFLDCGGLARTDKKPAICKSYLKLMTLWH  
 KSRPGSVVPANLFGQIKTVNPTFRGYSQQDAQEFRLCLMDLLHEELKEQVMEMEEEPQTLTSEETVEEEK  
 SQSDVDFQSCESCSEKAENESGSKGFPEDSNETTMLIQDEDDLEMAKDWQKEKVCNKINKANADVLD  
 KDRDVTVCETVDLNSQETVKVQIHRASEITDVHLNDLATSQILPSNESVSPRLSASPPKLGSLWPLSP  
 PHKKAQSTSARKKQHKKYRSVISDIFDGTVISSVQCLTCDRVSITLETQDL SLPPIPKEDLAKLHSS  
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 FCKVQKFEILCIHLKRFHLMFSTKISTHVSFPLEGLDLQPFLAKDSPAQIVTYDLLSVICHHTASS  
 GHYIAYCRNNLNLWYFDDQSVTEVSESTVQNAEAYVLFYRKSSEEAQKERRRISNLLNIMEPSLLQFY  
 ISRQWLNKFKTFAEPGPI SNNDFLCIHGGIPPRKASYIEDLVMLPQNIWNLYSRYGGGPAVNHLIYICH  
 TCQIELEKIEKRKTELEIFIRLNRAFQEEDSPATFYCISMQWFREWESFVKGKGDPPGPIDNTKIAVT  
 KCGSVMLKQGADSGQISEETWNFLQSIYGGGPEVILRPPVVHVPDVLQAEKIEVETRSL

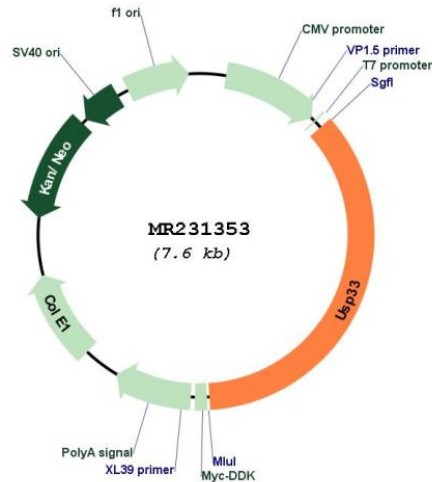
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001252486

**ORF Size:** 2703 bp

**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. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_001252486.1](#), [NP\\_001239415.1](#)

**RefSeq Size:** 4185 bp

**RefSeq ORF:** 2706 bp

**Locus ID:** 170822

**UniProt ID:** [Q8R5K2](#)

**Cytogenetics:** 3 H3

**MW:** 102.3 kDa

**Gene Summary:** Deubiquitinating enzyme involved in various processes such as centrosome duplication, cellular migration and beta-2 adrenergic receptor/ADRB2 recycling. Involved in regulation of centrosome duplication by mediating deubiquitination of CCP110 in S and G2/M phase, leading to stabilize CCP110 during the period which centrioles duplicate and elongate. Involved in cell migration via its interaction with intracellular domain of ROBO1, leading to regulate the Slit signaling. Plays a role in commissural axon guidance cross the ventral midline of the neural tube in a Slit-dependent manner, possibly by mediating the deubiquitination of ROBO1. Acts as a regulator of G-protein coupled receptor (GPCR) signaling by mediating the deubiquitination of beta-arrestins (ARRB1 and ARRB2) and beta-2 adrenergic receptor (ADRB2). Plays a central role in ADRB2 recycling and resensitization after prolonged agonist stimulation by constitutively binding ADRB2, mediating deubiquitination of ADRB2 and inhibiting lysosomal trafficking of ADRB2. Upon dissociation, it is probably transferred to the translocated beta-arrestins, leading to beta-arrestins deubiquitination and disengagement from ADRB2. This suggests the existence of a dynamic exchange between the ADRB2 and beta-arrestins. Deubiquitinates DIO2, thereby regulating thyroid hormone regulation. Mediates deubiquitination of both 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains. [UniProtKB/Swiss-Prot Function]