

Product datasheet for **RC203373**

MUS81 (NM_025128) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MUS81 (NM_025128) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MUS81
Synonyms:	SLX3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC203373 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGGCCCGGTCCGCTGGGCCGGAAGCGCCCGCTGCCTGCCTGCCAACCCGCTCTTCGTTTCGCT
 GGCTGACCGAGTGGCGGACGAGGCGACCCGACGAGGACCCGACGAGGACCCGACGCGCTTCGTATTTAGAAAGCGCT
 CGCTTCCCTCCGACGGTACCCACTGCCGCTGCGCAGCGGGAAGGAAGCTAAGATCTACAGCACTTCGGA
 GACGGGCTCTGCCGGATGCTGGACGAGCGGCTGCAGCGCACCGAACATCGGGCGGTGACCATGCCCCGG
 ACTCACCATCTGGAGAGAACAGTCCAGCCCGCAGGGGCGACTTGCAGGAGTCCAGGACTTTCATGCC
 AGTTCCTGCCAGCCAAAGCGGGAGGCTCTGGCAGTACTGGCCAGCTCGGCACTCAGGAGCCCGAGTG
 ATACTGCTGGTGTCTACCGGGAGCACCTGAATCCTAATGGTACCACCTCTTAACCAAGGAGGAGCTGC
 TGCAGAGGTGTGCTCAGAAGTCCCCAGGGTAGCCCTGGGAGTCCCCACCCTGGCCAGCCCTCCGCTC
 CCTCCTTACAGGAACCTGGTCTCAGGACACACCAGCCAGCCAGTACTATTGACCCAGAGGGCCTG
 GAGCTGGCCAGAAAGTTGGCCGAGTCAAGAGCCCTGAGCTTGTGAATGTGGGCATCGGGCCCAAGGAGC
 CCCCTGGGGAGGAGACAGCAGTCCAGGAGCAGCTTACAGCAGAGCTTGCAGTGAAGCAGGGTCCAGCA
 GCAGCCACTGGAGCTGAGGCCTGGAGAGTACAGGGTGTGTTGTGTGGACATTGGCGAGACCCGGGGG
 GGCGGGCACAGGCCGGAGCTGCTCCGAGAGCTACAGCGGCTGCACGTGACCCACACGGTGCAGCAAGTGC
 ACGTTGGAGATTTTGTGTGGTGGCTCAGGAGACCAATCCTAGAGACCCAGCAAACCTGGGGAGTTGGT
 ACTGGATCACATTGTGGAGCGAAGCGACTGGATGACCTTTCAGCAGCATCATCGACGGCCGCTCCGG
 GAGCAGAAGTCCGACTGAAGCGCTGTGGTCTGGAGCGCCGGGTATACCTGGTGAAGAGCATGGTCCG
 TCCACAACCTCAGCCTTCTGAGAGCACACTGCTCAGGCTGTCAACCAACTCAGGTCACTGATGGCTT
 TTTTGTGAAGCGCACAGCAGACATTAAGGAGTACGCCCGCTACCTGGCCCTTGTACTCGGGCCTGCAG
 AGACTCTACCAGGCCACACCCTACGCAGCCGCCCTGGGGAACCCCTGGGAACCCCTGAATCAGGGCCA
 TGACCTCTCAAACCCCTCTGCTCACTCCTCACCTTCAGTGACTTCAACGCAGGAGCCATCAAGAATAA
 GGCCAGTCGGTGCAGAAAGTGTTCGCCGGCAGCTGATGCAGGTGCGCGGAGTGAGTGGGGAGAAGGCA
 GCAGCCCTGGTGGATCGATACAGCACCCCTGCCAGCCTCTGGCCGCTATGATGCCTGTGCCACCCCA
 AGGAACAAGAGACTGCTGAGCACCATTAAGTGTGGGCGTCTACAGAGGAATCTGGGGCCTGCTCTGAG
 CAGGACCTATCCAGCTCTACTGCAGTACGGCCCTTGACC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203373 protein sequence
 Red=Cloning site Green=Tags(s)

MAAPVRLGRKRPLPACPNPLFVVRWLTEWRDEATRSRHRTRFVFQKALRSLRRYPLPLRSGKEAKILQHF
 DGLCRMLDERLQRHRTSGGDHAPDPSGENSPAPQGRLEAVQDSSMPVPAQPKAGGSGSYWPARGHSGARV
 ILLVLYREHLNPNNGHFLTKEELLQRCAQKSPRVAPGSAPPWPALRSLHRNLVLRTHQPARYSLTPEGL
 ELAQKLAESEGLSLLNVGIGPKEPPGEETAAPGAASAELASEAGVQQPLELRPGEYRVLLCVDIGETRG
 GGHRPELLRELQRLHVHTVVRKLHVGDVWVAQETNPRDPANPGLVLDHIVERKRLDDLCSSIIDGRFR
 EQKFRLLKRCGLERRVYLVEEHGSVHNLSLPESTLLQAVTNTQVIDGFFVKRTADIKESAAYLALLTRGLQ
 RLYQGHTLRSRPWGTGPNPESGAMTSPNPLCSLLTFSDFNAGAIKKAQSVREVFARQLMQVRGVSGEKA
 AALVDRYSTPASLLAAYDACATPKEQETLLSTIKCGRQLQRNLGPALSRTLSQLYCSYGPLT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6155_c10.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_025128

ORF Size: 1653 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_025128.3](#), [NP_079404.2](#)

RefSeq Size: 2406 bp

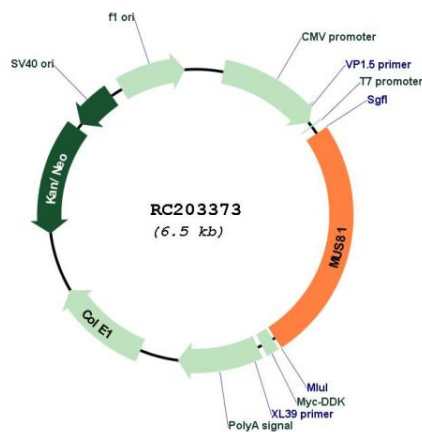
RefSeq ORF: 1656 bp

Locus ID: 80198

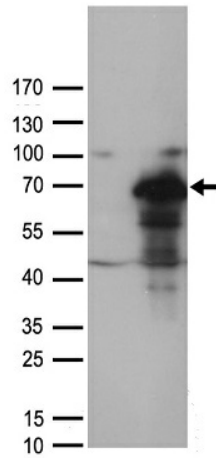
UniProt ID: [Q96NY9](#)
Cytogenetics: 11q13.1
Domains: ERCC4
Protein Pathways: Homologous recombination
MW: 61.1 kDa

Gene Summary: This gene encodes a structure-specific endonuclease which belongs to the XPF/MUS81 endonuclease family and plays a critical role in the resolution of recombination intermediates during DNA repair after inter-strand cross-links, replication fork collapse, and DNA double-strand breaks. The encoded protein associates with one of two closely related essential meiotic endonuclease proteins (EME1 or EME2) to form a complex that processes DNA secondary structures. It contains an N-terminal DEAH helicase domain, an excision repair cross complementation group 4 (ERCC4) endonuclease domain, and two tandem C-terminal helix-hairpin-helix domains. Mice with a homozygous knockout of the orthologous gene have significant meiotic defects including the failure to repair a subset of DNA double strand breaks. [provided by RefSeq, Jun 2017]

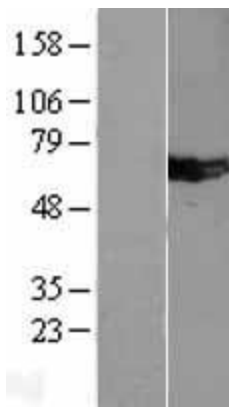
Product images:



Circular map for RC203373



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MUS81 (Cat# RC203373, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MUS81 antibody (Cat# [TA890060]). Positive lysates [LY403051] (100ug) and [LC403051] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403051]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203373 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MUS81 protein (Cat# [TP303373]). The protein was produced from HEK293T cells transfected with MUS81 cDNA clone (Cat# RC203373) using MegaTran 2.0 (Cat# [TT210002]).