

Product datasheet for **MR210226**

Yme111 (NM_013771) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Yme111 (NM_013771) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Yme111
Synonyms:	Ftsh; FtsH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR210226 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTCTCCCTGTCGAGCACTGTGCAGCCTCAGGTTACAATTCCTCTCAGTCATCTCATCAATGCTTTCC
 ATTCACCAAAAAATATATCTGTTTCTGTCAATACACCTGTTTCTCAAAAACAGCATCGAGATACAGTTCC
 TGAGCATGAAGCTCCAGTAGTGAGCCTGTGCTTAATTTAAGGGACCTGGATTATCTGAATTGAAAATT
 GGACAGATTGATAAAATGGTAGAAAATTTACTTCTGGGTTTTATAAAGACAAAAGAGTTTCTTCTGTT
 GGCATACATCTCATATTTCCGGCACAGTCTTTTTGAAAAATAATATGGTCACTTAGATATGTTCACTAC
 ATTACGTTCTCTAGCTTGTACAGGCAACATCCAAAACTCTTGAAGCATTGTTTTCAGATCTTCAGTAT
 TTTCCAGTTTTATACAGTCTCGGGGTTTCAAACGTTGAAATCAAGGACAGCAGTTTGCAGTCTACCT
 CTGAAAGATTAGTAGAAGCACAGAATATAGCACCATCATTGTGAAGGGGTTTCTTTTCCGGGACAGAGG
 AACAGATCTTGAGAGTTTGGACAACTTATGAAAATAAAAACATACCTGAAGCTACCAAGATGCATTT
 AAAACTGGTTTTGCAGAGGGTTTTCTCAAAGCTCAAGCTTACACAGAAGACCAATGATTCCTTAAGGC
 GAACTCGTCTGATCCTCTTTGTTTTGCTCCTGTTTGGCATTATGGACTCTTAAAAAATCCGTTTTTATC
 TGTGCGCTCCGGACAACACAGGACTTGATTCTGCGGTAGACCCTGTCCAGATGAAAAATGCACTTTT
 GAACATGTTAAAGGGGTGGAGGAAGCCAAACAAGGTTACAGGAAGTGGTTGAATTTTGA AAAATCCAC
 AGAAGTTTACTGTGCTTGGAGGTAAGTCCCAAGGAATTTTATAGTTGGGCCACCAGGAACAGGGAA
 GACGCTTCTTGCCGAGCTGTGGCAGGAGAAGTACGTTTCTTTTATTATGCTTCTGGATCAGAGTTT
 GATGAGATGTTTGTGGCGTAGGAGCCAGCAGGATCAGAAATCTTTTAGAGAAGCAAAAGCAAAATGCTC
 CTTGTGTTATTCATCGATGAATTAGATTCTGTTGGTGGAAAGAGAATTGAATCTCCAATGCACCCGTA
 TTCAAAGCAGACGATCAATCAGCTTCTTGCTGAAATGGATGGTTTTCAAACCAATGAAGGAGTAATCATT
 ATAGGTGCCACAAATTTCCAGAGGCATTAGATAATGCCTTAATACGTCCTGGTCGTTTTGATATGCAAG
 TTACAGTTCGAAGCCAGATGTGAAGGGTGAAGTGAATTTTGAATGGTATCTCAACAAGATAAAGTT
 TGATAAATCTGTTGATCCAGAAATCATAGCTCGAGGGACTGTTGGGTTCTCTGGAGCAGAGTTGGAGAAT
 CTTGTGAACCAAGCTGCACTAAAGGCAGCAGTTGATGGAAAAGAAATGGTTACCATGAAGGAACTAGAGT
 TTTCCAAGGATAAAATTTAATGGGGCCAGAAAGAAGTGTGGAAATTGATAACAAAAACAAAATCTAT
 AACAGCCTATCATGAATCTGGTCATGCTATTATTGCATATTACACAAAGGATGCAATGCCAATTAATAAA
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 AAACCTGAGCCAGCTGCTTGCACAGATGGATGTTAGCATGGGAGGAAGAGTGGCAGAGGAACTCATATT
 TGGAACTGATCATATTACAACCTGGTCTCTAGTGATTTTGATAATGCAACAAAAATTGCTAAGAGGATG
 GTTACCAATTTGGAATGAGTGAAGGCTTGGAGTTATGACCTACAGTGATACAGGAAAATAAGTCCTG
 AAACCTCAATCAGCCATTGAACAAGAAATAAGAAATCCTTCTACGGGAGTCAATGAACGAGCAAAACATAT
 CTTGAAAACACATGCGAAAGAACATAAGAACCTGGCAGAAGCATTGCTGACCTATGAGACTTTGGATGCC
 AAAGAGATTCAAATTTGTTCTTGAGGGGAAGAAATTGGAAGTGAGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR210226 protein sequence
Red=Cloning site Green=Tags(s)

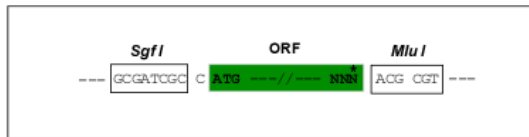
MFSLSSTVQPQVTIPLSHLINAFHSPKNISVSVNTPVVSQKQHRDTPVEHEAPSSEPVLNLRDLGLSELKI
 GQIDKMVENLLPGFYKDKRVSSCWHTSHISAQSFENKYGHLDMFSTLRSSSLYRQHPKTLRSICSDLQY
 FPFVFIQSRGFKTLKSRRRLQSTSERLVEAQNIAPSFVKGFLLRDRGTDLESCLKMKTNIPEAHQDAF
 KTGFAEGFLKAQALTQKTNDSLRRTRLILFVLLLFGIYGLLKNPFLSVRFRTTTGLDSAVDPVQMKNVTF
 EHVKGVEEAKQELQEVVEFLKNPQKFTVLGGKLPKGILLVGPPGTGKTLARAVAGEADVPFYYASGSEF
 DEMFVGVGASRIRNLFREAKANAPCVIFIDE LDSVGGKRIESPMHPYSRQTINQLLAEMDGFKNPNEGVII
 IGATNPFALDNALIRPGRFDMQVTVPRPDVKGRTEILKWLKIKFKDYSVDPEIARGTVGFSGAELN
 LVNQAALKAADVKGEMVTMKELEFSKDKILMGPERRSVEIDNKNKTITAYHESGHAIAYYTKDAMPINK
 ATIMPRGPTLGHVSLLPENDRWNETRAQLLAQMDVSMGGRVAEELIFGTDHITGASSDFDNATKIAKRM
 VTKFGMSEKLGVMTYSDTGKLPETQSAIEQEIRILLRESYERAKHILKTHAKEHKNLAEALLTYETLDA
 KEIQIVLEGKKLEVR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_013771

ORF Size: 2148 bp

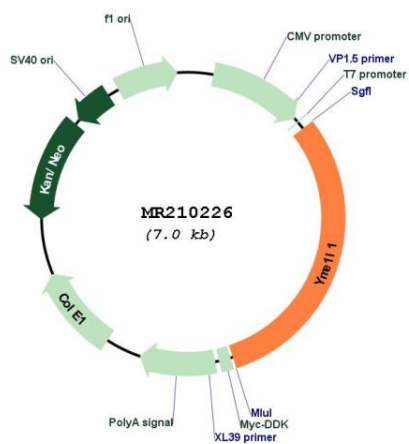
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<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:	NM_013771.1 , NM_013771.2 , NM_013771.3 , NM_013771.4 , NM_013771.5 , NP_038799.1
RefSeq Size:	4571 bp
RefSeq ORF:	2148 bp
Locus ID:	27377
UniProt ID:	O88967
Cytogenetics:	2 A3
MW:	80 kDa
Gene Summary:	<p>ATP-dependent metalloprotease that catalyzes the degradation of folded and unfolded proteins with a suitable degron sequence in the mitochondrial intermembrane region (By similarity). Plays an important role in regulating mitochondrial morphology and function by cleaving OPA1 at position S2, giving rise to a form of OPA1 that promotes maintenance of normal mitochondrial structure (PubMed:17709429, PubMed:24616225, PubMed:26785494, PubMed:27495975). Ensures cell proliferation, maintains normal cristae morphology and complex I respiration activity, promotes antiapoptotic activity and protects mitochondria from the accumulation of oxidatively damaged membrane proteins (By similarity). Required for normal, constitutive degradation of PRELID1 (PubMed:26785494). Catalyzes the degradation of OMA1 in response to membrane depolarization. Required to control the accumulation of nonassembled respiratory chain subunits (NDUFB6, OX4 and ND1) (By similarity). [UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR210226