

Product datasheet for **MG210226**

Yme111 (NM_013771) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Yme111 (NM_013771) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Yme111
Synonyms:	Ftsh; FtsH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG210226 representing NM_013771
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTTCTCCCTGTCGAGCACTGTGCAGCCTCAGGTTACAATTCCTCTCAGTCATCTCATCAATGCTTTCC
 ATTCACCAAAAAATATATCTGTTTCTGTCAATACACCTGTTTCTCAAAAACAGCATCGAGATACAGTTCC
 TGAGCATGAAGCTCCAGTAGTGAGCCTGTGCTTAATTTAAGGGACCTGGATTATCTGAATTGAAAATT
 GGACAGATTGATAAAATGGTAGAAAATTTACTTCTGGGTTTTATAAAGACAAAAGAGTTTCTTCTGTT
 GGCATACATCTCATATTTCCGGCACAGTCTTTTTGAAAAATAATATGGTCACTTAGATATGTTCACTAC
 ATTACGTTCTCTAGCTTGTACAGGCAACATCCAAAACTCTCGAAGCATTGTTTCAGATCTTCAGTAT
 TTTCCAGTTTTATACAGTCTCGGGTTTTCAAACGTTGAAATCAAGGACAGCAGTTTGCAGTCTACCT
 CTGAAAGATTAGTAGAAGCACAGAATATAGCACCATCATTGTGAAGGGGTTTTTTTTCGGGACAGAGG
 AACAGATCTTGAGAGTTGGACAACTTATGAAAATAAAAACATACCTGAAGCTACCAAGATGCATTT
 AAAACTGGTTTTGCAGAGGGTTTTCTCAAAGCTCAAGCTTACACAGAAGACCAATGATTCCTTAAGGC
 GAACTCGTCTGATCCTCTTTGTTTTGCTCCTGTTTGGCATTATGGACTCTTAAAAAATCCGTTTTTATC
 TGTGCGCTCCGGACAACACAGGACTTGATTCTGCGGTAGACCCTGTCCAGATGAAAAATGCACTTTT
 GAACATGTTAAAGGGGTGGAGGAAGCCAAACAAGATTACAGGAAGTGGTTGAATTTTGA AAAATCCAC
 AGAAGTTTACTGTGCTTGGAGGTAACTTCCCAAAGGAATTTTATAGTTGGGCCACCAGGAACAGGGAA
 GACGCTTCTTGCCGAGCTGTGGCAGGAGAAGCTGACGTTCTTTTTATTATGCTTCTGGATCAGAGTTT
 GATGAGATGTTTGTGGCGTAGGAGCCAGCAGGATCAGAAATCTTTTTAGAGAAGCAAAAGCAAAATGCTC
 CTTGTGTTATATTCATCGATGAATTAGATTCTGTTGGTGGAAAGAGAATTGAATCTCCAATGCACCCGTA
 TTCAAGGCAGACGATCAATCAGCTTCTTGCTGAAATGGATGGTTTTCAAACCAATGAAGGAGTAATCATT
 ATAGGTGCCACAAATTTCCAGAGGCATTAGATAATGCCTTAATACGTCCTGGTCGTTTTGATATGCAAG
 TTACAGTTCGAAGCCAGATGTGAAGGGTGAAGTGAATTTTGAATGGTATCTCAACAAGATAAAGTT
 TGATAAATCTGTTGATCCAGAAATCATAGCTCGAGGGACTGTTGGGTTCTCTGGAGCAGAGTTGGAGAAT
 CTTGTGAACCAAGCTGCACTAAAGGCAGCAGTTGATGGAAAAGAAATGGTTACCATGAAGGAACTAGAGT
 TTTCCAAGGATAAAAATTTAATGGGGCCAGAAAGAAGTGTGGAAATTGATAACAAAAACAAAATCTAT
 AACAGCCTATCATGAATCTGGTCATGCTATTATGCATATTACACAAAGGATGCAATGCCAATTAATAAA
 GCTACAATCATGCCTCGAGGGCCAACTTGGGCATGTACTGTTGCCTGAGAATGACAGATGGAATG
 AAACCTCGAGCCCAGCTGCTTGCACAGATGGATGTTAGCATGGGAGGAAGAGTGGCAGAGGAACTCATATT
 TGGAACTGATCATATTACAACCTGGTCTCTAGTGATTTTGATAATGCAACAAAAATTGCTAAGAGGATG
 GTTACCAATTTGGAATGAGTGAAGGCTTGGAGTTATGACCTACAGTGATACAGGAAAATAAGTCCTG
 AAACCTCAATCAGCCATTGAACAAGAAAATAAGAACTCTTACGGGAGTCATATGAACGAGCAAAACATAT
 CTTGAAAACACATGCGAAAGAACATAAGAACCTGGCAGAAGCATTGCTGACCTATGAGACTTTGGATGCC
 AAAGAGATTCAAATTTGTTCTTGAGGGGAAGAAATTGGAAGTGAGA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - **GTTTAA**

Protein Sequence: >MG210226 representing NM_013771
 Red=Cloning site Green=Tags(s)

MFSLSSTVQPQVTIPLSHLINAFHSPKNISVSVNTPVVSQKQHRDTPVEHEAPSSPEVNLNLRDLGLSELKI
 GQIDKMVENLLPGFYKDKRVSSCWHTSHISAQSFFENKYGHLDMFSTLRSSSLYRQHPKTLRSICSDLQY
 FPVFIQSRGFKTLKSRTRRLQSTSERLVEAQNIAPSFVKGFLLRDRGTDLESCLKMKTKNIPAHQDAF
 KTGFAGFLKAQALTQKTNDLRRTRLILFVLLLFGIYGLLKNPFLSVRFRTTTGLDSAVDPVQMKNVTF
 EHVKGVEEAKQELQEVVEFLKNPQKFTVLGGKLPKGILLVGPPGTGKTLARAVAGEADVPFYYASGSEF
 DEMFVGVGASRIRNLFREAKANAPCVIFIDE LDSVGGKRIESPMHPYSRQTINQLLAEMDGFKNPNEGVII
 IGATNPFALDNALIRPGRFDMQVTVPRPDVKGRTEILKWYLNKIKFKDYSVDPEIARGTVGFSGAELN
 LVNQAALKAAVDGKEMVTMKELEFSKDKILMGPERRSVEIDNKNKTITAYHESGHAIAYYTKDAMPINK
 ATIMPRGPTLGHVSLLPENDRWNETRAQLLAQMDVSMGGRVAEELIFGTDHITTGASSDFDNATKIAKRM
 VTKFGMSEKLGVMTYSDTGKLPETQSAIEQEIRILLRESYERAKHILKTHAKEHKNLAEALLTYETLDA
 KEIQIVLEGKKLEVR

TRTRPLE - GFP Tag - V

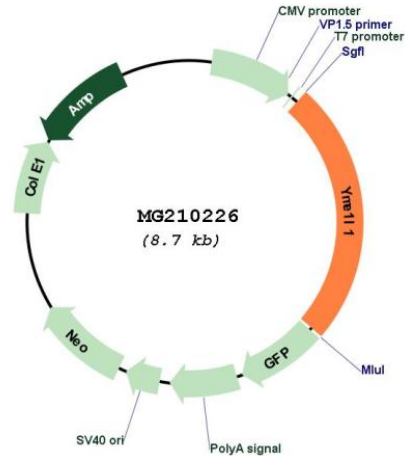
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_013771

ORF Size: 2145 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_013771.2](#), [NP_038799.1](#)

RefSeq Size: 4571 bp

RefSeq ORF: 2148 bp

Locus ID: 27377

UniProt ID: [O88967](#)

Cytogenetics: 2 A3

Gene Summary: 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]