

Product datasheet for **MG225460**

Fbxw7 (NM_001177773) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Fbxw7 (NM_001177773) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Fbxw7
Synonyms:	1110001A17Rik; AGO; Cdc4; Fbw7; Fbwd6; Fbx30; Fbxo30; Fbxw6; SEL-10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>MG225460 representing NM_001177773
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGAATCAGGAAGTCTCTCTGTGGCAGCAAAGACGACGAAGTGGAGGCTCTCTGAGAGGGAATGCTT
CCTCAAGCCAGGTTGATGAGGGACAGATGAATCGCGTGGTTGAGGAGGATCCACAGCAGCAAGCGAGACA
TCAAGAGGAGGAGCACACTGCGCGGAATGGTGAAGTGTGGGTGCAAACCTAGGCTGGAGACCAGAAC
GATACCCAGCAAGGACAAGTGGAGGAAAATAATAACCGCTTTATTTTCAGTAGATGAGGACTCTTCGGGAA
ATCAGGAAGAGCAAGAGGAAGATGAAGAGCATGCTGGGGAACAGGAGGAGGAAGAGGAGGAAGAGGAAGA
GGAGGAGGAGATGGACCAGGAGAGTGTGATTTTGTATCCGTCTGATGACAGTAGCAGAGAAGATGAACAT
ACGCACAATAGCAATGTCACAACTGCAGTAGTGTCTCGGACCTGCCCGCTACCCAGCTCTCCTCTCCAT
TCTATACAAAGACAACAAAAATGAAAAGAAAGTTGGACCATGGTCTGAAGTTCGTTCTTTTCTTTGGG
AAAGAAACCATGCAAAGTCTCAGATTATACCAGTACCCTGGCCTGTACCATGTTCCAGCAACCAACA
ACTTTTGGGGACCTGAGAGCAGCCAATGGGCAAGGGCAGCAGCGCGGAGGATTACATCTGTCCAACCAC
CCACAGGCCTTCAAGAGTGGCTGAAAATGTTTCAGAGCTGGAGCGGACCAGAGAAGTTGCTGGCTTTAGA
TGAGCTCATTGACAGCTGTGAACCAACACAAGTGAAGCATATGATGCAAGTGATAGAGCCCCAGTCCAG
CGAGACTTCATCTCCTTGTCTTAAAGAGTTGGCACTCTATGTGCTTTCATTCTGGAACCCAAAGACC
TGCTGCAAGCGGCTCAGACTTGTGATACTGGAGAATTTTGGCTGAGGATAACCTTCTCTGGAGAGAGAA
ATGTAAGAAGAGGGGATTGATGAACCGTTGCACATCAAGAGAAGAAAAATAATAAAACCAAGTTTCATA
CACAGCCCATGGAAGAGTGCATATACAGACAGCACAGAATTGATACAACTGGAGACGAGGAGAAGTCA
AATCTCCTAAGGTGCTGAAAGGGCATGATGACCATGTGATCACATGCCTACAGTTTGTGGCAACCGCAT
AGTTAGTGGTTCTGATGACAACACTTTAAAAGTTTGGTCAGCGGTACCGGCAAGTGTCTGAGAACGTTA
GTGGGACATACAGGTGGAGTGTGGTCATCACAGATGAGAGACAATATCATCATCAGTGGATCGACTGACC
GGACTCTCAAAGTGTGGAATGCTGAACTGGAGAGTGTATACATACTTTATATGGGCACACTTCTACTGT
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GCAGGAGGTTGTTAGTGGAGCTTATGATTTTATGGTGAAGGTGTGGATCCAGAGACTGAGACCTGTCT
ACACACGTTACAGGGACACACTAATAGAGTCTATTACAGTTTGTGGCATCCATGTGGTGTGAGTGA
TCTCTTGATACATCAATCCGAGTCTGGGATGTGGAGACAGGGAATTGTATTCACACGCTAACAGGACACC
AGTCATTAACGAGTGAATGGAAGTCAAAGACAATATTCTGTCTCTGGGAATGCAGATTCTACAGTTAA
GATCTGGGATATCAAACAGGACAGTGTTCACAACTTTGCAAGGTCCCAGCAAGCATCAGAGCGTGTG
ACCTGCTTACAGTTCAACAAGAAGTTCGTAATTACCAGCTCAGACGACGGAACCGTCAAAGTCTGGGACT
TGAAAACGGGTGAATTTATCCGAAACCTCGTCACATTGGAGAGTGGGGGAGCGGGGAGTTGTGTGGCG
GATCAGGGCCTCAAACACAAGCTGGTGTGTGCAGTCGGGAGTCGGAATGGAAGTGAAGAAACCAAGCTC
CTGGTGTGGACTTTGATGTGGACATGAAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG225460 representing NM_001177773
 Red=Cloning site Green=Tags(s)

MNQELLSVGSKRRTGGSLRGNASSQVDEGQMNRVVEEDPQQQARHQEEHTARNGELVGANPRPGDQN
 DTQQGQVEENNRFISVDEDSSGNQEEQEEDEEHAGEQEEEEEEEEEMDQESDDFDPSDDSSREDEH
 THNSNVTNCSSVSDLPAHQLSSPFYTKTKMKRKL DHGSEVRSFSLGKKPCKVSDYTSTTGLVPCSATPT
 TFGDLRAANGQGQRRRITSVQPPTGLQEWLKMFQSWSGPEKLLALDELIDSCEPTQVKHMMQVIEPQFQ
 RDFISLLPKELALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRKI IKPGFI
 HSPWKSAYIRQHRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGNRIVSGSDDNTLKVSAVTKCLRTL
 VGHGGVSSQMRDNIIISGSDRTLKVNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWD
 IETGQCLHVLMGHVAAVRCVQYDGRRVVSGAYDFMVKVWDPETETCLHTLQGHTNRVYSLQFDGIHVVSG
 SLDTSIRVWDVETGNCIHTLTGHQSLTSGMELKDNILVSGNADSTVKIWDIKTGQCLQTLQGPSKHQSAV
 TCLQFNKFNVITSSDDGTVKLWDLKTGEFIRNLVTLESGSGGVVWRIRASNTKLVCVAVSRNGTEETKL
 LVLDVDFVDMK

TRTRPLE - GFP Tag - V

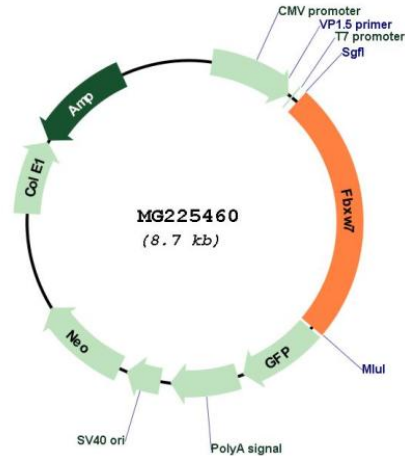
Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001177773

ORF Size: 2130 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_001177773.1](#), [NP_001171244.1](#)

RefSeq Size: 4183 bp

RefSeq ORF: 2133 bp

Locus ID: 50754

UniProt ID: [Q8VBV4](#)

Cytogenetics: 3 37.7 cM

Gene Summary: Substrate recognition component of a SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:21953459, PubMed:22748924). Recognizes and binds phosphorylated sites/phosphodegrons within target proteins and thereafter bring them to the SCF complex for ubiquitination (PubMed:22748924). Mediates ubiquitination and subsequent degradation of CCNE1 and MYC (PubMed:22748924). Identified substrates include cyclin-E (CCNE1 or CCNE2), DISC1, JUN, MYC, NOTCH1 released notch intracellular domain (NICD), NOTCH2, MCL1 and probably PSEN1 (By similarity). Acts as a negative regulator of JNK signaling by binding to phosphorylated JUN and promoting its ubiquitination and subsequent degradation (By similarity). SCF(FBXW7) complex mediates the ubiquitination and subsequent degradation of NFE2L1 (PubMed:21953459). Involved in bone homeostasis and negative regulation of osteoclast differentiation (PubMed:29149593). Regulates the amplitude of the cyclic expression of hepatic core clock genes and genes involved in lipid and glucose metabolism via ubiquitination and proteasomal degradation of their transcriptional repressor NR1D1; CDK1-dependent phosphorylation of NR1D1 is necessary for SCF(FBXW7)-mediated ubiquitination (PubMed:27238018).[UniProtKB/Swiss-Prot Function]