

Product datasheet for **MR225462**

Fbxw7 (NM_080428) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Fbxw7 (NM_080428) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Fbxw7
Synonyms:	1110001A17Rik; AGO; Cdc4; Fbw7; Fbwd6; Fbx30; Fbxo30; Fbxw6; SEL-10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR225462 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCGTGTGTGCGTCCCAGCAGCGTTCTGGTTCTGAGCTGCGTCTGCTGGTCTGGGGAGTTTTGCTGC
 CGGTTCCGCTGCCTAATCTTCTTTTCTGGCGTGCTGAGCATGTCCACGTTAGAATCTGTGACATACCT
 ACCTGAAAAGGGTTATATTGTCAGAGACTGCCAAGCAGCCGGACACACGGGGGCACAGAATCCCTGAAG
 GGGAAAAATACAGAAAATATGGGTTTCTACGGCACATTAATAATGATTTTTTACAAAATGAAAAGAAAGT
 TGGACCATGGTTCTGAGTTTCGTTCTTTTCTTTGGGAAAGAAACCATGCAAAGTCTCAGATTATACCGAG
 TACCACTGGCCTGTACCATGTTCAACACCAACAACCTTTGGGGACCTGAGAGCAGCCAATGGGC
 GGGCAGCAGCGCGGAGGATTACATCTGTCCAACCCACAGGCCTTCAAGAGTGGCTGAAAATGTTTC
 AGAGCTGGAGCGGACCAGAGAAGTTGCTGGCTTAGATGAGCTCATTGACAGCTGTGAACCAACACAAGT
 GAAGCATATGATGCAAGTATAGAGCCCAAGTCCAGCGAGACTTCATCTCCTTGCTTCTAAAGAGTTG
 GCACTCTATGTGCTTTCATTCTGGAACCCAAAGACCTGCTGCAAGCGGCTCAGACTTGTGATACTGGA
 GAATTTGGCTGAGGATAACCTTCTCTGGAGAGAGAAATGTAAGAAGAGGGGATTGATGAACCGTTGCA
 CATCAAGAGAAGAAAAATAATAAACAGGTTTACATACACAGCCCATGGAAGAGTGCATATACAGACAG
 CACAGAATTGATACAACTGGAGACGAGGAGAAGTCAAACTCTCCTAAGGTGCTGAAAGGGCATGATGACC
 ATGTGATCACATGCCTACAGTTTGTGGCAACCGCATAGTTAGTGGTCTGATGACAACACTTTAAAAGT
 TTGGTCAGCGGTACGGGCAAGTGTCTGAGAACGTTAGTGGGACATACAGGTGGAGTGTGGTCATCACAG
 ATGAGAGACAATATCATCATCAGTGGATCGACTGACCGGACTCTCAAAGTGTGGAATGCTGAAACTGGAG
 AGTGTATACATACTTTATATGGGCACACTCTACTGTACGGTGTATGCATCTCCATGAAAAAGGGTTGT
 AAGCGGTTCTCGAGATGCCACTCTCAGGTTTGGGATATTGAGACCGGCCAGTGTTTACAGTCTCGATG
 GGTACAGTACGAGCGGTCCGCTGCGTTCAGTATGATGGCAGGAGGTTGTTAGTGGAGCTTATGATTTTA
 TGGTGAAGGTGTGGGATCCAGAGACTGAGACCTGTCTACACACGTTACAGGGACACACTAATAGAGTCTA
 TTCATTACAGTTTGTGGCATCCATGTGGTGGTGGATCTCTTGATACATCAATCCGAGTCTGGGATGTG
 GAGACAGGGAATTGATTCACACGCTAACAGGACACCAGTCAATTAACGAGTGGAAATGGAACCTCAAAGACA
 ATATTCTGTCTCTGGGAATGCAGATTCTACAGTTAAGATCTGGGATATCAAACAGGACAGTGTTTACA
 AACTTTGCAAGGTCCCAGCAAGCATCAGAGCGCTGTGACCTGCTTACAGTTCAACAAGAAGTTCGTAATT
 ACCAGCTCAGACGACGGAACGGTCAAACCTGGGACTTAAAACGGGTGAATTTATCCGAAACCTCGTCA
 CATTGGAGAGTGGGGGAGCGGGGAGTTGTGTGGCGGATCAGGGCCTCAAACACAAAGCTGGTGTGTGC
 AGTCGGGAGTCGGAATGGAAGTGAAGAAACCAAGCTCCTGGTGTGGACTTTGATGTGGACATGAAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225462 protein sequence
 Red=Cloning site Green=Tags(s)

MRVCVPSSVLVLSVCWCWGVLLPVPLPNLPFLACLMSSTLESVTYLPEKGLYCQRLPSSRTHGGTESLK
 GKNTENMGFYGLKMIIFYKMKRRLDHGSEVRSFSLGKKPCKVSDYTSTTGLVPCSATPTTFGDLRAANGQ
 GQQRRTITSVQPPTGLQEWLKMFSWSGPEKLLALDELIDSEPTQVKHMMQVIEPQQRDFISLLPKEL
 ALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRKIIPGFIHSPWKSAYIRQ
 HRIDTNWRRGELKSPKVLKGHDDHVITCLQFCGNRIVSGSDNTLVKWSAVTGKCLRTL VGHTGGVWSSQ
 MRDNIIISGSTDRTLKVWNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWDIETGQCLHVL
 MHVAAVRCVQYDGRVSVGAYDFMVKVPETETCLHTLQGHNTNRVYSLQFDGIHVVSGLDTSIRVWDV
 ETGNCIHTLTGHQSLTSGMELKDNILVSGNADSTVKIWDIKTGQCLQLQGPSKHQSAVTCQFNKFNVI
 TSSDDGTVKLWDLKTGEFIRNLVTLESGSGGVVWRIRASNTKLVCVAVGSRNGTEETKLLVLDVDFVDMK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_080428

ORF Size: 1890 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_080428.2](#), [NM_080428.3](#), [NP_536353.2](#)

RefSeq Size: 3728 bp

RefSeq ORF: 1890 bp

Locus ID: 50754

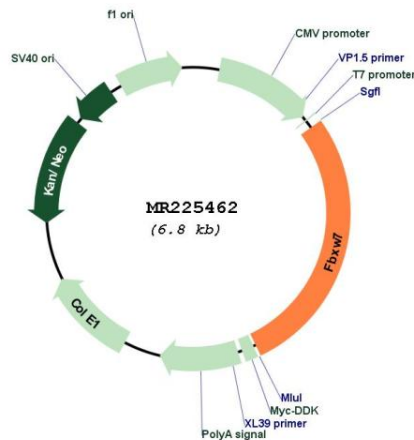
UniProt ID: [Q8VBV4](#)

Cytogenetics: 3 37.7 cM

MW: 70.5 kDa

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]

Product images:



Circular map for MR225462