

## Product datasheet for **MR225461**

### **Fbxw7 (NM\_001177774) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Fbxw7 (NM_001177774) 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>MR225461 representing NM\_001177774  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAATCAGGAAGTCTCTCTGTGGCAGCAAAGACGACGAAGTGGAGGCTCTCTGAGAGGGAATGCTT  
 CCTCAAGCCAGGTTGATGAGGGACAGATGAATCGCGTGGTTGAGGAGGATCCACAGCAGCAAGCGAGACA  
 TCAAGAGGAGGAGCACACTGCGCGGAATGGTGAACCTGTGGGTGCAAACCCTAGGCCTGGAGACCAGAAC  
 GATACCCAGCAAGGACAAGTGGAGGAAAATAATAACCGCTTTATTTTCAGTAGATGAGGACTCTTCGGGAA  
 ATCAGGAAGAGCAAGAGGAAGATGAAGAGCATGCTGGGGAACAGGAGGAGGAAGAGGAGGAAGAGGAAGA  
 GGAGGAGGAGATGGACCAGGAGAGTGTGATTTTGTATCCGTCTGATGACAGTAGCAGAGAAGATGAACAT  
 ACGCACAATAGCAATGTCACAACTGCAGTAGTGTCTCGGACCTGCCCGCTACCCAGCTCTCTCTCCAT  
 TCTATACAAAGACAACAAAAATGAAAAGAAAGTTGGACCATGGTCTGAAGTTCGTTCTTTTCTTTGGG  
 AAAGAAACCATGCAAAGTCTCAGATTATACCAGTACCCTGGCCTGTACCATGTTCCAGCAACCAACA  
 ACTTTTGGGGACCTGAGAGCAGCCAATGGGCAAGGGCAGCAGCGCGGAGGATTACATCTGTCCAACCAC  
 CCACAGGCCTTCAAGAGTGGCTGAAAATGTTTCAGAGCTGGAGCGGACCAGAGAAGTTGCTGGCTTTAGA  
 TGAGCTCATTGACAGCTGTGAACCAACACAAGTGAAGCATATGATGCAAGTGATAGAGCCCCAGTCCAG  
 CGAGACTTCATCTCCTTGCTTCTAAAGAGTTGGCACTCTATGTGCTTTCATTCTGGAACCCAAAGACC  
 TGCTGCAAGCGGCTCAGACTTGTGATACTGGAGAATTTTGGCTGAGGATAACCTTCTCTGGAGAGAGAA  
 ATGTAAGAAGAGGGGATTGATGAACCGTTGCACATCAAGAGAAGAAAAATAATAAAACCAGTTTCATA  
 CACAGCCCATGGAAGAGTGCATATCAGACAGCACAGAATTGATACAACTGGAGACGAGGAGAAGTCA  
 AATCTCCTAAGGTGCTGAAAGGGCATGATGACCATGTGATCACATGCCTACAGTTTGTGGCAACCGCAT  
 AGTTAGTGGTTCTGATGACAACACTTTAAAAGTTTGGTCAGCGGTCACGGGCAAGTGTCTGAGAAGGTTA  
 GTGGGACATACAGGTGGAGTGTGGTCATCACAGATGAGAGACAATATCATCATCAGTGGATCGACTGACC  
 GGACTCTCAAAGTGTGGAATGCTGAAACTGGAGAGTGTATACATACTTTATATGGGCACACTTCTACTGT  
 ACGGTGTATGCATCTCCATGAAAAAGGGTTGTAAGCGGTTCTCGAGATGCCACTCTCAGGGTTTGGGAT  
 ATTGAGACCGCCAGTGTTCACAGTCTGATGGGTCACGTAGCAGCGGTCGCTGCGTTTTCAGTATGATG  
 GCAGGAGGTTGTTAGTGGAGCTTATGATTTTATGGTGAAGGTGTGGATCCAGAGACTGAGACCTGTCT  
 ACACACGTTACAGGGACACACTAATAGAGTCTATTTCATTACAGTTTGTGGCATCCATGTGGTGAGTGGA  
 TCTCTTGATACATCAATCCGAGTCTGGGATGTGGAGACAGGGAATTGTATTCACACGCTAACAGGACACC  
 AGTCATTAACGAGTGGAATGGAACCTCAAAGACAATATTCTTGTCTCTGGGAATGCAGATTCTACAGTTAA  
 GATCTGGGATATCAAACAGGACAGTGTTCACAACTTTGCAAGGTCCCAGCAAGCATCAGAGCGTGTG  
 ACCTGCTTACAGTTCAACAAGAAGTTCGTAATTACCAGCTCAGACGACGGAACCGTCAAACCTCTGGGACT  
 TGAAAACGGGTGAATTTATCCGAAACCTCGTCACATTGGAGAGTGGGGGAGCGGGGGAGTTGTGTGGCG  
 GATCAGGGCCTCAAACACAAGCTGGTGTGTGCAGTCGGGAGTCGGAATGGAAGTGAAGAAACCAAGCTC  
 CTGGTGTGGACTTTGATGTGGACATGAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR225461 representing NM\_001177774  
Red=Cloning site Green=Tags(s)

MNQELLSVGSKRRRTGGSLRGNASSSQVDEGQMNRRVVEEDPQQQARHQEEHTARNGELVGANPRPGDQN  
 DTQQGQVEENNRFISVDEDSSGNQEEQEEDDEEHAGEQEEEEEEEEEMDQESDDDFPSDDSSREDEH  
 THNSNVTNCSSVSDLPALHQLSSPFYTKTKMKRKLDPHSEVRSFSLGKKPCKVSDYTSTTGLVPCSATPT  
 TFGDLRAANGQGGQRRRITSVQPPTGLQEWLKMFQSWSGPEKLLALDELIDSCPTQVKHMMQVIEPQFQ  
 RDFISLLPKELALYVLSFLEPKDLLQAAQTCRYWRILAEDNLLWREKCKEEGIDEPLHIKRRKIIPKPGFI  
 HSPWKSAYIRQHRIDTNWRRGELKSPKVLKGDHDDHVTCLQFCGNRIVSGSDNTLKVWSAVTGKCLRTL  
 VGHTGGVSSQMRDNIIISGSDRDLKVNNAETGECIHTLYGHTSTVRCMHLHEKRVVSGSRDATLRVWD  
 IETGQCLHVLGMHVAAVRCVQYDGRRVVSGAYDFMVKVWDPETETCLHTLQGHTNRVYSLQFDGIHVVSG  
 SLDT SIRVWDVETGNCIHTLTGHQSLTSGMELKDNILVSGNADSTVKIWDIKTGQCLQTLQGPSKHQSAV  
 TCLQFNKFNVITSSDDGTVKLWDLKTGEFIRNLVTLESGSGGVVWRIRASNTKLCAVGSRNGTEETKL  
 LVLDFDVKMK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**ACCN:** NM\_001177774

**ORF Size:** 2130 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_001177774.1](#), [NP\\_001171245.1](#)

**RefSeq Size:** 4092 bp

**RefSeq ORF:** 2133 bp

**Locus ID:** 50754

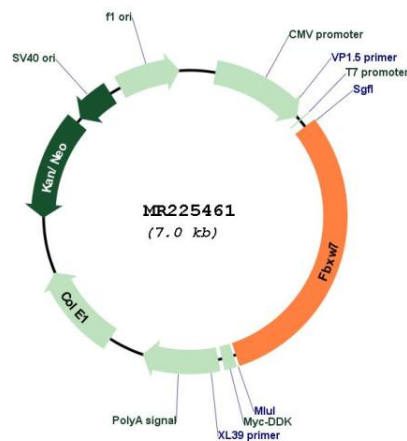
**UniProt ID:** [Q8VBV4](#)

**Cytogenetics:** 3 37.7 cM

**MW:** 79.8 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 MR225461