

## Product datasheet for **MR225160**

### Axin1 (NM\_001159598) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Axin1 (NM_001159598) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Axin1
Synonyms:	AI316800; Axin; Fu; fused; Kb; Ki; kinky; knobbly
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide  
Sequence:**

>MR225160 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCAGAGTCCAAAATGAATGTCCAGGAGCAGGGTTTCCCTTGGACCTCGGAGCAAGTTTACCGAAG  
 ATGCCCCCGGCCCCAGTGCCTGGAGAAGAGGGAGAAGTGGTATCTACTGATTCGAGGCCGTGCAACCA  
 CAGTTTCTGTTCTGGAAAGGTACCAGCATTAAAAGTGAGACCTCAACAGCCACCCCAAGACGTTAGAT  
 CTGGATCTGGGATATGAGCCGAGGGCAGTGCCTCCCCACCCACCATATTTGAGGTGGGCTGAGTCAC  
 TGCATTCTTACTGGATGACCAAGATGGGATCAGCCTGTTGAGGACTTTCCTGAAGCAGGAGGGCTGTGC  
 TGACCTGCTGGACTTCTGGTTTGCCTGCAGTGGCTTCAGGAAGCTTGAGCCCTGTGACTCAAATGAGGAA  
 AAGAGGCTGAAGCTGGCAAGAGCCATCTACCGAAAGTACATCCTGGATAGCAATGGCATTGTGTCCAGAC  
 AAACCAAGCCAGCCACTAAGAGCTTCATAAAGGACTGTGTATGAAGCAGCAGATAGATCCTGCCATGTT  
 TGACCAGGCACAGACAGAAATCCAGTCCACCATGGAGGAGAATACCTACCCTTCTTTCTTAAGTCTGAC  
 ATTTATTTGGAGTACACAAGGACAGGCTCAGAGAGTCCGAAGGCTGCAGTGAACAGAGCTCAGGGTCTG  
 GAACAGGGAAGGGCATGTCTGGATACCTGCCACTTTGAATGAGGATGAAGAATGAAATGTGACCAAGA  
 TGCAGATGAGGATGATGGCCGAGACCCTCTCCCCCAGCAGGCTCACCCAGAAGCTGCTATTGGAGACT  
 GCTGCCCCGAGGGCCCCCTCAAGTAGACGGTACAACGAAGGCAGAGAGCTCAGGTATGGATCTTGGAGGG  
 AGCCCGTCAACCCCTACTACGTCAACTCTGGCTATGCCCTGGCCCCAGCCACCAGTGCCAATGACAGTGA  
 GCAGCAGAGCCTGTCCAGTATGCTGACACGCTATCCCTACGGACAGTAGTGTGGATGGAATCCCCCA  
 TACAGGATCCGTAAAGCAGCACCGAAGGGAGATGCAGGAGAGTATCCAAGTCAATGGGCGGGTACCTCTAC  
 CTCACATTCCTCGCACTTACCGAATGCCAAAGGAGATCCGGGTAGACCACAGAAATTTGCTGAAGAGCT  
 TATTCACCGTCTAGAGGCTGTCCAGCGCACTCGAGAGGCTGAAGAAAAGTTGGAGGAACGGCTGAAGCGT  
 GTACGCATGGAGGAAGAAGGGGAGGATGGTGAATGCCTTCTGGCCCCATGGCAAGTACACAGTGCCTT  
 CTGTCCCAGCTTGGCACCATTTCCACCCCGCTATGTGGATATGGGCTGCTCTGGACTGCGGGATGCCCA  
 TGAGGAGAATCCTGAGAGCATCCTGGATGAGCAGTGCAGGAGGTCATGAGGACACCTGGCTGCCAGTCA  
 CCTGGCCAGGCCACCGCTCTCCTGACAGTGGGCATGTGGCTAAGACTGCAGTGTAGGGGGTACAGCCT  
 CCGGGCATGGGAAGCATGTTCTAAGTTAGGGTTGAAGCTGGATACAGCTGGCCTGCACCATCATAGACA  
 TGTCCACCACCATGTTCCACATAATTCAGCTAGACCTAAGGAGCAAATGGAGGCTGAAGTTGCCCGCAGG  
 GTCCAGAGCAGCTTCTCGTGGGGCCAGAAACACATGGTATGCCAAGCCCCGGAGCTATCCGAGAACG  
 CAGGCACCACCCTCAGTGTGGGGATTTGGCCTTTGGTGGTAAAAGTGTGCACCTTCCAAAAGAAACAC  
 CAAGAAGGCTGAATCTGGGAAGAATGCCAATGCTGAGGTACCCAGTACCACAGAGGACGCTGAGAAGAAC  
 CAGAAGATCATGCAGTGGATCATTGAGGGAGAGAAGGAGATCAGTAGACACCCGGAAGGCAGGCCATGGGT  
 CTTCTGGGTTGAGGAAGCAGCAGGCCATGAAAGCTCCAGGCCCTTGCCATCGAGCGTCTGGGGCCGT  
 GCACCCCTGGGTGAGCGCTCAGCTTCGGAATCTGTCCAGCCTTCTCATCTTTTCATCCAAGATCCCACA  
 ATGCCACCCAATCCAGCCCCTAATCCCCTGACCAGCTGGAAGAGGCCCGCAGGCCGTTTGGAAAGAAGAAG  
 AAAAGAGAGCAAACAACTGCCCTCAAAGCAGAGGACAAAATCACAAAGAAGGCAGGTGGCGGGAGTGC  
 ACCACCATGTGACAGCATTGTTGTGGCCTACTATTTCTGTGGGAACCCATCCCCTACCGGACCCCTGGTG  
 AGGGGCCGTGCTGTACCCTGGGCCAGTTCAAGGAGCTGCTAACCAAGAAGGGGAGCTACAGATACTACT  
 TTAAGAAAGTGAAGTATGAGTTTACTGTGGTGTGGTATTTGAGGAAGTACGGGAGGATGAGCCGCTCT  
 GCCTGTCTTTGAAGAAAAGATCATCGGCAAGGTGGAAAAGGTGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR225160 protein sequence  
 Red=Cloning site Green=Tags(s)

MQSPKMNVEQGFPLDLGASFTEDAPRPPVPGEEGELVSTDSRPVNHSCSGKGTSIKSETSTATPRRSD  
 LDLYEPEGSASPTPPYLRWAESLHSLDDQDGI SLFRFLKQEGCADLLDFWACSGFRKLEPCDSNEE  
 KRLLKLARAIYRKYILDSNGIVSRQTKPATKSF IKDCVMKQQIDPAMFDQAQTEIQSTMEENTYPSFLKSD  
 IYLEYTRTGSESPKVCSDQSSGSGTGKGMGYLPTLNEDEEWKCDQDAEDDGRDPLPPSRLTQKLLLET  
 AAPRAPSSRRYNEGRELRYGWSWREPVPYVNSGYALAPATSANDSEQQLSSDADTLSLTDSSVDGIPP  
 YRIRKQHRREMQESI QVNGRVPLPHIPRTYRMPKEIRVEPQKFAEEL IHRLEAVQRTREAEKLEERLKR  
 VRMEEEGEDGEMPSGPMASHKLPVPAWHHFPPRYVDMGCSGLRDAHEENPESILDEHVQRMRTPGCQS  
 PGPGRSPDSGHVAKTAVLGGTASGHGKHVPKLGKLDTAGLHHHRHVHHVHHNSARPKEQMEAEVARR  
 VQSSF SWGPETHGHAKPRSYSENAGTTL SAGDLAFGGKTSAPSKRNTKKAESGKNANA EVPSTTEDAEKN  
 QKIMQWII EGEKEISRHRKAGHGSSGLRKQQAHESSRPLS IERPGAVHPWVSAQLRNSVQPSHLFIQDPT  
 MPPNPAPNPLTQLEEARRRLEEEK RANKLPSKQRTKSQRKAGGGSAPPCDSIVVAYYFCGEPIPYRTL  
 RGRAVTLGQFKELLTKKGSYRYFFKKV SDEFDCGVVFEEVREDEAVLPVFEEKIIGKVEKVD

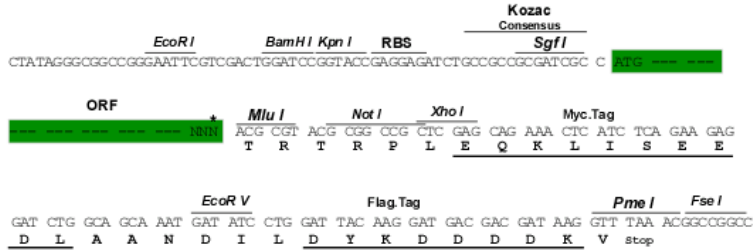
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

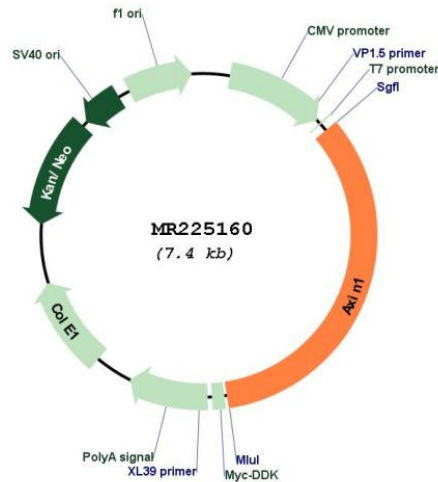
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001159598

**ORF Size:** 2496 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\\_001159598.1](#), [NP\\_001153070.1](#)

**RefSeq Size:** 3671 bp

**RefSeq ORF:** 2499 bp

**Locus ID:** 12005

**Cytogenetics:** 17 13.07 cM

**MW:** 93 kDa

**Gene Summary:** Component of the beta-catenin destruction complex required for regulating CTNNB1 levels through phosphorylation and ubiquitination, and modulating Wnt-signaling (By similarity). Controls dorsoventral patterning via two opposing effects; down-regulates CTNNB1 to inhibit the Wnt signaling pathway and ventralize embryos, but also dorsalizes embryos by activating a Wnt-independent JNK signaling pathway. In Wnt signaling, probably facilitates the phosphorylation of CTNNB1 and APC by GSK3B. Likely to function as a tumor suppressor. Facilitates the phosphorylation of TP53 by HIPK2 upon ultraviolet irradiation. Enhances TGF-beta signaling by recruiting the RNF111 E3 ubiquitin ligase and promoting the degradation of inhibitory SMAD7 (By similarity). Also component of the AXIN1-HIPK2-TP53 complex which controls cell growth, apoptosis and development.[UniProtKB/Swiss-Prot Function]