

## Product datasheet for **RR205458**

### Axin1 (NM\_024405) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Axin1 (NM_024405) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Axin1
Synonyms:	Axin; axin-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RR205458 representing NM\_024405  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCAGAGTCCAAAATGAATGTCCAGGAGCAGGGTTTCCCTTGACCTCGGAGCAAGTTTACCCGAAG  
 ATGCCCCCGGCCCCAGTGCCTGGAGAAGAGGGAGAAGTGGTATCCACTGATTCGAGGCCGTGCAACCA  
 CAGTTTCTGCTCTGGAAAGGTACCAGCATTAAAAGTGAGACCTCAACAGCCACCCCAAGACGTTAGAT  
 CTGGATCTGGGATATGAGCCTGAGGGCAGTGCCTCCCCACCCACCATACTTGAGGTGGGCTGAGTCAC  
 TGCATTCTTACTGGATGACCAAGATGGGATCAGCCTGTTGAGGACTTTCCTGAAGCAGGAGGGCTGTGC  
 TGACCTGCTGGACTTCTGGTTTGCCTGCAGTGGCTTCAGAAAGCTTGAGCCTTGACTCAAATGAGGAA  
 AAGAGGCTGAAGCTGGCAAGAGCCATCTACCGAAAGTACATCCTGGATAGCAATGGCATTGTGTCCAGAC  
 AAACCAAGCCAGCCACTAAGAGCTTCATAAAGGACTGCGTCATGAAGCAGCAGATCGATCCTGCCATGTT  
 TGACCAGGCACAGACAGAAATCCAGTCCACCATGGAGGAGAACACCTACCCTTCTTCTTAAGTCTGAC  
 ATTTATTTGGAGTACACAAGGACAGGCTCAGAAAGTCAAAGGTCTGCAGTGACCAGAGCTCAGGGTCCG  
 GGACAGGGAAGGGCATGTCTGGATACTTGCCACTTTGAATGAAGATGAAGAATGAAATGTGACCAAGA  
 TGCAGATGAGGATGATGGCCGAGACTCTGTCCCCCAGCAGGCTCACCCAGAAGCTGCTATTGGAGACT  
 GCTGCCCCGAGGGCCCCCAAGTAGACGGTACAACGAAGGCAGAGAGCTCAGGTATGGATCTTGGAGGG  
 AGCCTGTCAACCCTACTATGTCAACTCTGGCTATGCCCTGGCCCCAGCCACCAGTGCCAATGACAGTGA  
 GCAGCAGAGCCTGTCCAGTGTGCTGACTCTATCCCTCACGGACAGTAGCGTGGATGGAATCCCCCA  
 TACAGGATCCGTAAGCAGCACCGAAGGGAGATGCAGGAGAGTGTCCAAGTCAATGGGCGGGTACCTCTAC  
 CTCACATTCCTCGCACTTACCGAATGCCAAAGGAGATCCGGGTAGACCACAGAAATTTGCTGAAGAGCT  
 TATTCACCGTCTAGAGGCTGTCCAGCGTACTCGAGAGGCTGAAGAAAAGTTGGAGGAACGGCTGAAGCGT  
 GTACGCATGGAGGAAGAAGGGGAAGATGGGAAATGCCTTCTGGCCCCATGGCAAGTACACAGTGCCTT  
 CTGTCCCAGCTTGGCACCATTTCCACCTCGCTATGTGGATATGGGCTGCTCCGGACTGCGGGATGCCCA  
 TGAGGAGAATCCTGAGAGCATCCTGGATGAGCATGTGCAAGGGTCAAGGAGACCTGGCTGCCAGTCA  
 CCTGGCCCAGGCCACCGCTCTCCTGACAGCGGGCATGTGGCAAGACTGCAGTGTAGGGGGTACAGCAT  
 CTGGGCATGGGAAGCATGCTCCTAAGTTAGGGTTGAAGCTGGATTGAGTGGCTGCACCACCATAGGCA  
 CGTCCACCACCAGTTCACCATAATTGAGTACAGCCCAAGGAGCAATGGAGGCTGAAGTGCCTCCAGG  
 GTCCAGAGCAGCTTCTCATGGGGCCAGAAACACATGGTTCATGCCAAGCCCCGAAGCTATTCAGAGAGCA  
 CAGGCACCAACCCAGTGTGGGACTTGGCCTTTGGTGGTAAAGCTAGTGCACCCTCCAAAAGAAACAC  
 CAAGAAGGCTGAATCTGGGAAGAATGCCAGTGTGAGGTACCCAGTACCACAGAGGATGCAGAGAAGAAC  
 CAGAAGATCATGCAGTGGATCATTGAGGGGGAGAAGGAGATCAGTAGACACCCGGAAGGCAGGCCATGGGT  
 CTTCTGGGATGAGGAAGCAGCAGGCCATGAAAGCTCCAGGCCCTTGTCATTGAAGCTCCTGGGCGGT  
 GCACCCCTGGGTGAGTGTGCTCAGCTTCGGAATCTGTCCAGCCTTCTCATCTTTCATCCAAGATCCCACA  
 ATGCCACCAATCCAGCCCCTAATCCTCTGACCCAGCTGGAAGAGGCCCGCAGGCCGTTGGAGGAAGAAG  
 AAAAGAGAGCAAACTGCCCCTCAAGCAGAGGACAAAATCACAAAGAAAGGCAGGTGGCGGGAGTGC  
 ACCACCATGTGACAGTATCGTTGTGGCCTACTATTTCTGTGGTGAACCAATACCCTACCGGACCCCTGGT  
 AGGGGCCGTGCTGTACCCCTGGGCCAGTTCAAGGAGCTGCTAACCAAGAAGGGGAGCTACAGATACTACT  
 TTAAGAAAGTGTGACGAGTTTACTGTGGTGGTATTTGAGGAAGTACGGGAAGATGAGCCATCCT  
 GCCTGTCTTTGAAGAAAAGATCATCGGCAAGGTGGAAAAGGTGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RR205458 representing NM\_024405  
 Red=Cloning site Green=Tags(s)

MQSPKMNVEQGFPLDLGASFTEDAPRPPVPGEEGELVSTDSRPVNHSCSGKGTSIKSETSTATPRRSD  
 LDLYEPEGSASPTPPYLRWAESLHSLDDQDGI SLFRFLKQEGCADLLDFWFACSGFRKLEPCDSNEE  
 KRLKLARAIYRKYILDSNGIVSRQTKPATKSF IKDCVMKQQIDPAMFDQAQTEIQSTMEENTYPSFLKSD  
 IYLEYTRTGSESPKVCSDQSSGSGTGKGMGYLPTLNEDEEWKCDQDAEDDGRDSVPPSRLTQKLLLET  
 AAPRAPSSRRYNEGRELRYGWSWREPVPYVNSGYALAPATSANDSEQQLSSDADTLSLTDSSVDGIPP  
 YRIRKQHRREMQESVQVNGRVPLPHIPRTYRMPKEIRVEPQKFAEEL IHRLEAVQRTREAEKLEERLKR  
 VRMEEEGEDGEMPSGPMASHKLPSVPAWHHFPPRYVDMGCSGLRDAHEENPESILDEHVQRMRTPGCQS  
 PGPGHRSPDSGHVAKTAVLGGTASGHGKHAPKLGKLD SAGLHHRHVHHVHHNSARPKEQMEAEAARR  
 VQSSF SWGPETHGHAKPRSYSESTGTNPSAGDLAFGGKASAPSKRNTKKAESGKNASAEVPSTTEDAEKN  
 QKIMQWII EGEKEISRHRKAGHGSSGMRKQQAHESSRPLS IERPGAVHPWVSAQLRNSVQPSHLFIQDPT  
 MPPNPAPNPLTQLEEARRRLEEEK RANKLPSKQRTKSQRKAGGGSAPPCDSIVVAYYFCGEPIPYRTL  
 RGRAVTLGQFKELLTKKGSYRYFFKKV SDEFDCGVVFEEVREDEAILPVFEEKIIGKVEKVD

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_024405

**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\\_024405.1](#), [NP\\_077381.1](#)

**RefSeq Size:** 3460 bp

**RefSeq ORF:** 2499 bp

**Locus ID:** 79257

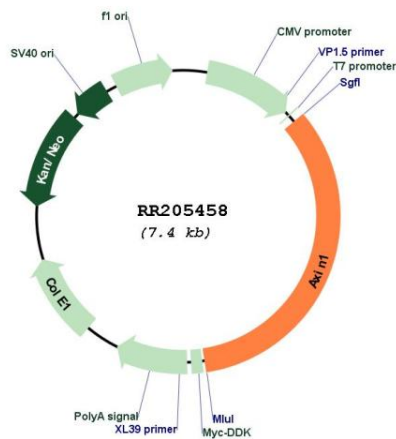
**UniProt ID:** [O70239](#)

**Cytogenetics:** 10q12

**MW:** 92.9 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 beta-catenin to inhibit the Wnt signaling pathway and ventralize embryos, but also dorsalizes embryos by activating a Wnt-independent JNK signaling pathway (By similarity). Also facilitates the phosphorylation of APC by GSK3B (By similarity). Facilitates the phosphorylation of TP53 by HIPK2 upon ultraviolet irradiation (By similarity). Enhances TGF-beta signaling by recruiting the RNF111 E3 ubiquitin ligase and promoting the degradation of inhibitory SMAD7 (By similarity).[UniProtKB/Swiss-Prot Function]

## Product images:



Circular map for RR205458