

## Product datasheet for **RC400176**

### Axin 1 (AXIN1) (NM\_003502) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	Axin 1 (AXIN1) (NM_003502) Human Mutant ORF Clone
Mutation Description:	L106R
Affected Codon#:	106
Affected NT#:	c.317
Nucleotide Mutation:	AXIN1 Mutant (L106R), Myc-DDK-tagged ORF clone of Homo sapiens axin 1 (AXIN1), transcript variant 1 as transfection-ready DNA
Effect:	Missense
Symbol:	AXIN1
Synonyms:	AXIN; PPP1R49
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_003502
ORF Size:	2586 bp
Restriction Sites:	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC400176 representing NM\_003502  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAATATCCAAGAGCAGGGTTTCCCCTTGGACCTCGGAGCAAGTTTCACCGAAGATGCTCCCCGACCCC  
 CAGTGCCTGGTGAGGAGGGAGAAGTGGTGTCCACAGACCCGAGGCCCGCCAGCTACAGTTTCTGCTCCGG  
 GAAAGGTGTTGGCATTAAAGGTGAGACTTCGACGGCCACTCCGAGGCGCTCGGATCTGGACCTGGGGTAT  
 GAGCCTGAGGGCAGTGCCTCCCCACCCACCATACTTGAAGTGGGCTGAGTCACTGCATTCCCTGCTGG  
 ATGACCAAGATGGGATAAGCCTGTTCCAGACTTCCGGAAGCAGGAGGGCTGTGCCGACTTGTGGACTT  
 CTGGTTTGCTGCACTGGCTTCAGGAAGCTGGAGCCCTGTGACTCGAACGAGGAGAAGAGGCTGAAGCTG  
 GCGAGAGCCATCTACCGAAAGTACATTCTTGATAACAATGGCATCGTGTCCCGGCAGACCAAGCCAGCCA  
 CCAAGAGCTTCATAAAGGGCTGCATCATGAAGCAGCTGATCGATCCTGCCATGTTTGACCAGGCCAGAC  
 CGAAATCCAGGCCACTATGGAGGAAAACACCTATCCCTCCTTCTTAAGTCTGATATTTATTTGGAAATAT  
 ACGAGGACAGGCTCGGAGAGCCCAAAGTCTGTAGTGACCAGAGCTCTGGGTGAGGACAGGGAAGGGCA  
 TATCTGGATACCTGCCGACCTTAAATGAAGATGAGGAATGGAAGTGTGACCAGGACATGGATGAGGACGA  
 TGGCAGAGACGCTGCTCCCCCGGAAGACTCCCTCAGAAGCTGCTCCTGGAGACAGCTGCCCCGAGGGTC  
 TCCTCCAGTAGACGGTACAGCGAAGGCAGAGAGTTCAGGTATGGATCCTGGCGGGAGCCAGTCAACCCCT  
 ATTATGTCAATGCCGGCTATGCCCTGGCCCCAGCCACCAGTGCCAACGACAGCGAGCAGCAGAGCCTGTC  
 CAGCGATGCAGACACCCTGTCCCTCACGGACAGCAGCGTGGATGGGATCCCCCATAACAGGATCCGTAAG  
 CAGCACCGCAGGGAGATGCAGGAGAGCGTGCAGGTCAATGGGCGGGTCCCCTACCTCACATTTCCCGCA  
 CGTACCCGGTGCCGAAGGAGGTCCCGTGGAGCCTCAGAAGTTCGCGGAGGAGCTCATCCACCCGCTGGA  
 GGCTGTGCAGCGCACGCGGGAGGCCGAGGAGAAGCTGGAGGAGCGGCTGAAGCGCGTGCCGATGGAGGAG  
 GAAGGTGAGGACGGCGATCCATCGTCAGGGCCCCAGGGCCGTGTCAAAAGTGCCTCCCGCCCCGCTT  
 GGCACCACTTCCCGCCCCGCTGTGTGGACATGGGCTGTGCCGGCTCCGGGATGCACACGAGGAGAACC  
 TGAGAGCATCCTGGACGAGCAGTACAGCGTGTGCTGAGGACACCTGGCCGCCAGTGCCTGGGCTGGC  
 CATCGCTCCCGGACAGTGGGCAGTGGCCAAGATGCCAGTGGCACTGGGGGTGCCGCTCGGGGCAGC  
 GGAAGCACGTACCAAGTCAGGGGCGAAGCTGGACGCGGCCGGCTGCACCACCACCGACAGTCCACCA  
 CCACGTCCACCACAGCACAGCCCGCCCAAGGAGCAGGTGGAGGCCGAGGCCACCCGAGGGCCAGAGC  
 AGCTTCGCTGGGGCCTGGAACCACACGCCATGGGGCAAGTCCCGAGGCTACTCAGAGAGTGTGGCG  
 CTGCCCCCAACGCCAGTGTGGCTCGCCACAGTGGGAAGTGGGCGTGGCGTGCAAAAAGAAATGCCAA  
 GAAGGTGAGTCGGGGAAGAGCGCCAGCACCGAGGTGCCAGGTGCCTCGGAGGATGCGGAGAAGAACCAG  
 AAAATCATGCAGTGGATCATTGAGGGGGAAAAGGAGATCAGCAGGCACCCGAGGACCGGCCACGGGTCTT  
 CGGGGACGAGGAAGCCACAGCCCATGAGAACTCCAGACCCCTTGTCCCTTGAACCCCTGGGCCGGCC  
 TCAGCTCCGGACCTCCGTGCAGCCCTCCACCTTTCATCCAAGACCCCAACATGCCACCCACCCAGCT  
 CCCAACCCCTAACCCAGCTGGAGGAGGCGGCCGACGCTGGAGGAGGAAGAAAAGAGAGCCAGCCGAG  
 CACCCTCAAGCAGAGGTATGTGCAGGAGTTATGCGGCGGGACGCGCTGCGTCAGGCCAGCGTGC  
 GCCGGTGTGCAGTGGTACCAGCCGTGTCGGACATGGAGCTCTCCGAGACAGAGACAAGATCGCAGAGG  
 AAGGTGGGCGGGGAGTGCCAGCCGTGTGACAGCATCGTTGTGGCGTACTACTTCTGGGGGAACCCA  
 TCCCTACCGCACCTGGTGGGGCCGCGCTGTACCCTGGGCCAGTTCAAGGAGCTGTGACCAAAAA  
 GGGCAGCTACAGATACTTCAAGAAAGTGAAGCAGAGTTTACTGTGGGGTGGTGTGGAGGAGTT  
 CGAGAGGACGAGGCCGCTCCTGCCGCTTTGAGGAGAAGATCATCGGCAAGTGGAGAAGGTGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC400176 representing NM\_003502  
 Red=Cloning site Green=Tags(s)

MNIQEQQGFPLDLGASFTEDAPRPPVPGEELVSTDP RPASYSFCSGKGVGKGETSTATPRRSDLGLY  
 EPEGSASPTPPYLKWAESLHSLDDQDGLSFRTRFKQEGCADLLDFWFACTGFRKLEPCDSNEEKRLKL  
 ARAIYRKYILDNNGIVSRQTKPATKSF IKGCI MKQLIDPAMFDQAQTEIQATMEENTYPSFLKSDIYLEY  
 TRTGSESPKVCSDQSSSGSGTGKISGYLPTLNEDDEWKCDQMDDEDGRDAAPPGRLPQKLLLET AAPRV  
 SSSRRYSEGREFRYGSWREP VNPYYVNAGYALAPATSANDSEQQLSSDADTLSLTDSSVDGIPPYRIRK  
 QHRREMQESVQVNGRVPLPHIPRTYRVPKEVRVEPQKFAEELIHRLEAVQRTREAEKLEERLKRVRMEE  
 EGEDGDPSSGPPGPCHKLPPAPAWHHFPPRCVDMGCAGLRDAHEENPESILDEHVQRLRTPGRQSPGPG  
 HRSPDSGHVAKMPVALGGAASGHGKHPKSGAKLDAAGLHHRHVHHVHHSTARPKEQVEAEATRAQS  
 SFAWGLEPHSHGARSRGYSESVGAAPNASDGLAHSGKGVACKRNAKKAESGKSASTEVPGASEDAEKNQ  
 KIMQWII EGEKEISRHRRTGHGSSGTRKPQPHENSRLSLEHPWAGPQLRTSVQPSHLFIQDPTMPPHPA  
 PNPLTQLEEARRRLEEEK RASRAPSQRVYVQVMRRGRACVRPACAPVLHVVPVSDMELSETETRSQR  
 KVGGSQAQPCDSIVVAYYFCGEP I PYRTLVRGRAVTLGQFKELLTKKGSYRYFKKVSDFDCGVVFEEV  
 REDEAVLPVFEEKIIGKVEKVD

TRTRPLEQKLISEEDLAANDILDYKDDDDKVV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**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).

**RefSeq:**

[NP\\_003493](#)

RefSeq Size:	3675 bp
RefSeq ORF:	2589 bp
Locus ID:	8312
Cytogenetics:	16p13.3
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - Wnt Signaling pathway
Protein Pathways:	Basal cell carcinoma, Colorectal cancer, Endometrial cancer, Pathways in cancer, Wnt signaling pathway
MW:	95 kDa
Gene Summary:	<p>This gene encodes a cytoplasmic protein which contains a regulation of G-protein signaling (RGS) domain and a dishevelled and axin (DIX) domain. The encoded protein interacts with adenomatosis polyposis coli, catenin beta-1, glycogen synthase kinase 3 beta, protein phosphate 2, and itself. This protein functions as a negative regulator of the wiggless-type MMTV integration site family, member 1 (WNT) signaling pathway and can induce apoptosis. The crystal structure of a portion of this protein, alone and in a complex with other proteins, has been resolved. Mutations in this gene have been associated with hepatocellular carcinoma, hepatoblastomas, ovarian endometrioid adenocarcinomas, and medullablastomas. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2016]</p>