

Product datasheet for **RC400174**

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:	R841Q
Affected Codon#:	841
Affected NT#:	c.2521_22
Nucleotide Mutation:	AXIN1 Mutant (R841Q), 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:

>RC400174 representing NM_003502
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAATATCCAAGAGCAGGGTTTCCCCTTGGACCTCGGAGCAAGTTTCACCGAAGATGCTCCCCGACCC
 CAGTGCCTGGTGAGGAGGGAGAACTGGTGTCCACAGACCCGAGGCCCGCCAGCTACAGTTTCTGCTCCGG
 GAAAGGTGTTGGCATTAAAGGTGAGACTTCGACGGCCACTCCGAGGCGCTCGGATCTGGACCTGGGGTAT
 GAGCCTGAGGGCAGTGCCTCCCCACCCACCATACTTGAAGTGGGCTGAGTCACTGCATTCCCTGCTGG
 ATGACCAAGATGGGATAAGCCTGTTCCAGACTTTCCTGAAGCAGGAGGGCTGTGCCGACTTGCTGGACTT
 CTGGTTTGCTGCACTGGCTTCAGGAAGCTGGAGCCCTGTGACTCGAACGAGGAGAAGAGGCTGAAGCTG
 GCGAGAGCCATCTACCGAAAGTACATTCTTGATAACAATGGCATCGTGTCCCGGCAGACCAAGCCAGCCA
 CCAAGAGCTTCATAAAGGGCTGCATCATGAAGCAGCTGATCGATCCTGCCATGTTTGACCAGGCCAGAC
 CGAAATCCAGGCCACTATGGAGGAAAACACCTATCCCTCCTTCTTAAGTCTGATATTTATTTGGAAATAT
 ACGAGGACAGGCTCGGAGAGCCCAAAGTCTGTAGTGACCAGAGCTCTGGGTGAGGGACAGGGAAGGGCA
 TATCTGGATACCTGCCGACCTTAAATGAAGATGAGGAATGGAAGTGTGACCAGGACATGGATGAGGACGA
 TGGCAGAGACGCTGCTCCCCCGGAAGACTCCCTCAGAAGCTGCTCCTGGAGACAGCTGCCCCGAGGGTC
 TCCTCCAGTAGACGGTACAGCGAAGGCAGAGAGTTCAGGTATGGATCCTGGCGGGAGCCAGTCAACCCCT
 ATTATGTCAATGCCGGCTATGCCCTGGCCCCAGCCACCAGTGCCAACGACAGCGAGCAGCAGAGCCTGTC
 CAGCGATGCAGACACCCTGTCCCTCACGGACAGCAGCGTGGATGGGATCCCCCATAACAGGATCCGTAAG
 CAGCACCGCAGGGAGATGCAGGAGAGCGTGCAGGTCAATGGGCGGGTGCCCTACCTCACATTTCCCGCA
 CGTACCGGGTGCCGAAGGAGGTCCCGTGGAGCCTCAGAAGTTCGCGGAGGAGCTCATCCACCGCTGGA
 GGCTGTGCAGCGCACGCGGGAGGCCGAGGAGAAGCTGGAGGAGCGGCTGAAGCGCGTGCCGATGGAGGAG
 GAAGGTGAGGACGGCGATCCATCGTCAGGGCCCCAGGGCCGTGTCAAAAGTGCCTCCCGCCCCGCTT
 GGCACCACTTCCCGCCCCGCTGTGTGGACATGGGCTGTGCCGGCTCCGGGATGCACACGAGGAGAACC
 TGAGAGCATCCTGGACGAGCAGTACAGCGTGTGCTGAGGACACTGGCCGCGAGTGCCTGGGCTGGC
 CATCGCTCCCGGACAGTGGGCAGTGGCCAAGATGCCAGTGGCACTGGGGGTGCCGCTCGGGGCAGG
 GGAAGCACGTACCAAGTCAGGGGCGAAGCTGGACGCGGCCGGCTGCACCACCACCGACAGTCCACCA
 CCACGTCCACCACAGCACAGCCCGCCCAAGGAGCAGGTGGAGGCGAGGCCACCCGAGGGCCAGAGC
 AGCTTCGCTGGGCTGGAACACACAGCCATGGGGCAAGTCCGAGGCTACTCAGAGAGTGTGGCG
 CTGCCCAACCGCAGTGTGGCTCGCCACAGTGGGAAGTGGGCGTGGCGTGCAAAAAGAAATGCCAA
 GAAGGTGAGTGGGGAAGAGCGCCAGCACCGAGGTGCCAGGTGCCTCGGAGGATGCGGAGAAGAACCAG
 AAAATCATGCAGTGGATCATTGAGGGGGAAAAGGAGATCAGCAGGCACCGCAGGACCGGCCACGGGTCTT
 CGGGGACGAGGAAGCCACAGCCCATGAGAACTCCAGACCTTGTCCCTTGAACCCCTGGGCCGGCC
 TCAGCTCCGGACCTCCGTGCAGCCCTCCACCTTTCATCCAAGACCCACCATGCCACCCACCCAGCT
 CCCAACCCCTAACCCAGCTGGAGGAGGCGGCCGACGCTGGAGGAGGAAGAAAAGAGAGCCAGCCGAG
 CACCCTCAAGCAGAGGTATGTGCAGGAGTTATGCGGCGGGACGCGCTGCGTCAGGCCAGCGTGC
 GCCGCTGTCACGTGGTACCAGCCGTGCGGACATGGAGCTCTCCGAGACAGAGACAAGATCGCAGAGG
 AAGGTGGGCGGGGAGTGCCAGCCGTGTGACAGCATGTTGTGGCGTACTACTTCTGGGGAAACCCA
 TCCCTACCGCACCTGGTGGGGCCGCGCTGTACCCTGGGCCAGTTCAAGGAGCTGTGACCAAAAA
 GGGCAGCTACAGATACTTCAAGAAAGTGAAGCAGAGTTTACTGTGGGTTGGTGTGGAGGTT
 GAAGAGGACGAGGCCGCTCCTGCCGCTTTGAGGAGAAGATCATCGGCAAGTGGAGAAGGTGGAC

ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC400174 representing NM_003502
Red=Cloning site Green=Tags(s)

MNIQEQQGFPLDLGASFTEDAPRPPVPGEELVSTDRPASYSFCSGKGVGKGETSTATPRRDLGLGY
 EPEGSASPTPPYLKWAESLHSLDDQDGLSFRFLKQEGCADLLDFWFACTGFRKLEPCDSNEEKRLKL
 ARAIYRKYILDNNGIVSRQTKPATKSF IKGCIMKQLIDPAMFDQAQTEIQATMEENTYPSFLKSDIYLEY
 TRTGSESPKVCSDQSSSGSGTGKISGYLPTLNEDEEWKCDQDDEDDGRDAAPPGRLPQKLLLET AAPRV
 SSSRRYSEGREFRYGSWREPVPNPYYVAGYALAPATSANDSEQQLSSDADTLSLTDSSVDGIPPYRIRK
 QHRREMQESVQVNGRVPLPHIPRTYRVPKEVRVEPQKFAEELIHRLEAVQRTREAEKLEERLKRVRMEE
 EGEDGDPSSGPPGPCHKLPPAPAWHHFPPRCVDMGCAGLRDAHEENPESILDEHVQRLRTPGRQSPGPG
 HRSPDSGHVAKMPVALGGAASGHGKHPKSGAKLDAAGLHHHRHVHHVHHSTARPEQVEAEATRAQS
 SFAWGLEPHSHGARSRGYSESVGAAPNASDGLAHSGKGVACKRNAKKAESGKSASTEVPGASEDAEKNQ
 KIMQWIIIEGEKEISRHRRTGHGSSGTRKQPHENSRLSLEHPWAGPQLRTSVQPSHLFIQDPTMPPHPA
 PNPLTQLEEARRRLEEEKASRAPSQRVYVQVMRRGRACVRPACAPVLHVVPVSDMELSETETRSQR
 KVGGSQAQPCDSIVVAYYFCGEPYRTRLVRGRAVTLGQFKELLTKKGSYRYFKKVSDFDCGVVFEEV
 EEDEAVLPVFEEKIIGKVEKVD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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 wntless-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>