OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC400178

Axin 2 (AXIN2) (NM_004655) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	Axin 2 (AXIN2) (NM_004655) Human Mutant ORF Clone
Mutation Description:	R659W
Affected Codon#:	659
Affected NT#:	c.1975
Nucleotide Mutation:	AXIN2 Mutant (R659W), Myc-DDK-tagged ORF clone of Homo sapiens axin 2 (AXIN2) as transfection-ready DNA
Effect:	Missense
Symbol:	AXIN2
Synonyms:	AXIL; ODCRCS
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_004655
ORF Size:	2529 bp
Restriction Sites:	SgfI-MluI

View online »

ORF Nucleotide Sequence:

>RC400178 representing NM_004655
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGTAGCGCTATGTTGGTGACTTGCCTCCCGGACCCCAGCAGCAGCTTCCGTGAGGATGCCCCGCGGC
CCCCAGTGCCAGGGGAAGAAGGGGAGACCCCACCGTGTCAGCCAGGGGTGGGCAAGGGCCAGGTCACCAA
ACCCATGCCTGTCTCTTCCAACACCAGGCGGAACGAAGATGGGTTGGGGGAGCCGGAGGGGCGGGCATCT
CCGGATTCCCCTCTGACCCGGTGGACCAAGTCCTTACACTCCTTATTGGGCGATCAAGACGGTGCTTACC
TGTTCCGAACTTTCCTGGAGAGGGAGAAATGCGTGGATACCTTAGACTTCTGGTTTGCCTGCAATGGATT
CAGGCAGATGAACCTGAAGGATACCAAAACTTTACGAGTAGCCAAAGCGATCTACAAAAGGTACATTGAG
AACAACAGCATTGTCTCCAAGCAGCTGAAGCCTGCCACCAAGACCTACATAAGAGATGGCATCAAGAAGC
AGCAGATTGATTCCATCATGTTTGACCAGGCGCAGACCGAGATCCAGTCGGTGATGGAGGAAAATGCCTA
CCAGATGTTTTTGACTTCTGATATATACCTCGAATATGTGAGGAGTGGGGGAGAAAACACAGCTTACATG
AGTAATGGGGGACTCGGGAGCCTAAAGGTCGTGTGTGGCTATCTCCCCACCTTGAATGAAGAAGAGGAGT
GGACTTGTGCCGACTTCAAGTGCAAACTTTCGCCAACCGTGGTTGGCTTGTCCAGCAAAACTCTGAGGGC
CACGGCGAGTGTGAGGTCCACGGAAACTGTTGACAGTGGATACAGGTCCTTCAAGAGGAGCGATCCTGTT
AATCCTTATCACATAGGTTCTGGCTATGTCTTTGCACCAGCCACCAGCGCCAACGACAGTGAGATATCCA
GTGATGCGCTGACGGATGATTCCATGTCCATGACGGACAGCAGTGTAGATGGAATTCCTCCTTATCGTGT
GGGCAGTAAGAAACAGCTCCAGAGAGAAATGCATCGCAGTGTGAAGGCCAATGGCCAAGTGTCTCTACCT
CATTTCCCGAGAACCCACCGCCTGCCCAAGGAGATGACCCCCGTGGAACCCGCCACCTTTGCAGCTGAGC
TGATCTCGAGGCTGGAAAAGCTGAAGCTGGAGTTGGAGAGCCGCCACAGCCTGGAGGAGCGCCTGCAGCA
GATCCGAGAGGATGAAGAGAGAGAGGGCTCCGAGCTCACACTCAATTCGCGGGAGGGGGCGCCCACGCAG
CACCCCCTCTCCCTACTGCCCTCCGGCAGCTACGAGGAAGACCCGCAGACGATACTGGACGATCACCTGT
CCAGGGTCCTCAAGACCCCTGGCTGCCAGTCTCCAGGCGTAGGCCGCTATAGCCCCCGCTCCCGCTCCCC
GGACCACCACCACCACCACCATTCGCAGTACCACTCCCTGCTCCCGCCCGGTGGCAAGCTGCCTCCCGCG
GCCGCCTCGCCGGGCGCCTGCCCCCTCCTCGGGGGCAAAGGCTTTGTGACCAAGCAGACGACGAAGCATG
TCCACCACCACTACATCCACCACCATGCCGTCCCCAAGACCAAGGAGGAGATCGAGGCGGAGGCCACGCA
GCGGGTGCACTGCTTCTGCCCTGGGGGCAGCGAGTATTACTGCTACTCGAAATGCAAAAGCCACTCCAAG
GCTCCGGAAACCATGCCCAGCGAGCAGTTTGGCGGCAGCAGAGGCAGTACCTTGCCCAAACGCAATGGGA
AAGGCACGGAGCCGGGCCTGGCCCTGCCCGCCAGGGAAGGAGGGGCCCCCGGCGGAGCTGGGGCCCTGCA
GCTTCCCCGGGAGGAAGGAGACAGGTCGCAGGATGTCTGGCAGTGGATGCTGGAGAGTGAGCGGCAGAGC
AAGCCCAAGCCCCATAGTGCCCAAAGCACAAAAAAGGCCTACCCCTTGGAGTCTGCCCGCTCGTCTCCAG
GCGAACGAGCCAGCTGGCACCATCTGTGGGGGGGCAACAGCGGGCACCCCCGCACCACCCCCCGTGCCCA
CCTGTTCACCCAGGACCCTGCGATGCCTCCCCTGACCCCACCCAACACGCTGGCTCAGCTGGAGGAGGCC
TGTCGCAGGCTAGCTGAGGTGTCGAAGCCCCCAAAGCAGCGGTGCTGTGTGGCCAGTCAGCAGAGGGACA
GGAATCATTCGGCCACTGTTCAGACGGGAGCCACACCCTTCTCCAATCCAAGCCTGGCTCCAGAAGATCA
CAAAGAGCCAAAGAAACTGGCAGGTGTCCACGCGCTCCAGGCCAGTGAGTTGGTTGTCACTTACTTTTTC
TGTGGGGAAGAAATTCCATACCGGAGGATGCTGAAGGCTCAGAGCTTGACCCTGGGCCACTTTAAAGAGC
AGCTCAGCAAAAAGGGAAATTATAGGTATTACTTCAAAAAAGCAAGCGATGAGTTTGCCTGTGGAGCGGT
GTTTGAGGAGATCTGGGAGGATGAGACGGTGCTCCCGATGTATGAAGGCCGGATTCTGGGCAAAGTGGAG
CGGATCGAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

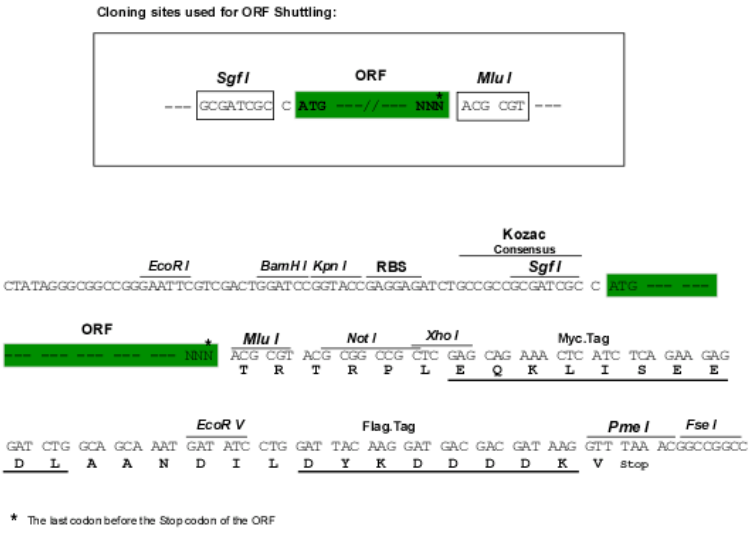
>RC400178 representing NM_004655
Red=Cloning site Green=Tags(s)

MSSAMLVTCLPDPSSSFREDAPRPPVPGEEGETPPCQPGVGKGQVTKPMPVSSNTRRNEDGLGEPEGRAS
PDSPLTRWTKSLHSLLGDQDGAYLFRTFLEREKCVDTLDFWFACNGFRQMNLKDTKTLRVAKAIYKRYIE
NNSIVSKQLKPATKTYIRDGIKKQQIDSIMFDQAQTEIQSVMEENAYQMFLTSDIYLEYVRSGGENTAYM
SNGGLGSLKVVCGYLPTLNEEEEWTCADFKCKLSPTVVGLSSKTLRATASVRSTETVDSGYRSFKRSDPV
NPYHIGSGYVFAPATSANDSEISSDALTDDSMSMTDSSVDGIPPYRVGSKKQLQREMHRSVKANGQVSLP
HFPRTHRLPKEMTPVEPATFAAELISRLEKLKLELESRHSLEERLQQIREDEEREGSELTLNSREGAPTQ
HPLSLLPSGSYEEDPQTILDDHLSRVLKTPGCQSPGVGRYSPRSRSPDHHHHHHSQYHSLLPPGGKLPPA
AASPGACPLLGGKGFVTKQTTKHVHHHYIHHHAVPKTKEEIEAEATQRVHCFCPGGSEYYCYSKCKSHSK
APETMPSEQFGGSRGSTLPKRNGKGTEPGLALPAREGGAPGGAGALQLPREEGDRSQDVWQWMLESERQS
KPKPHSAQSTKKAYPLESARSSPGERASWHHLWGGNSGHPRTTPRAHLFTQDPAMPPLTPPNTLAQLEEA
CRRLAEVSKPPKQRCCVASQQRDRNHSATVQTGATPFSNPSLAPEDHKEPKKLAGVHALQASELVVTYFF
CGEEIPYRRMLKAQSLTLGHFKEQLSKKGNYRYYFKKASDEFACGAVFEEIWEDETVLPMYEGRILGKVE
RID

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_004646

RefSeq Size:	4241 bp
RefSeq ORF:	2532 bp
Locus ID:	8313
Cytogenetics:	17q24.1
Domains:	RGS, DAX
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Induced pluripotent stem cells
Protein Pathways:	Basal cell carcinoma, Colorectal cancer, Endometrial cancer, Pathways in cancer, Wnt signaling pathway
MW:	93 kDa
Gene Summary:	The Axin-related protein, Axin2, presumably plays an important role in the regulation of the stability of beta-catenin in the Wnt signaling pathway, like its rodent homologs, mouse conductin/rat axil. In mouse, conductin organizes a multiprotein complex of APC (adenomatous polyposis of the colon), beta-catenin, glycogen synthase kinase 3-beta, and conductin, which leads to the degradation of beta-catenin. Apparently, the deregulation of beta-catenin is an important event in the genesis of a number of malignancies. The AXIN2 gene has been mapped to 17q23-q24, a region that shows frequent loss of heterozygosity in breast cancer, neuroblastoma, and other tumors. Mutations in this gene have been associated with colorectal cancer with defective mismatch repair. [provided by RefSeq, Jul 2008]