

Product datasheet for **RC210931**

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

Product data:

Product Type:	Expression Plasmids
Product Name:	Axin 2 (AXIN2) (NM_004655) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Axin 2
Synonyms:	AXIL; ODCRCS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC210931 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGTAGCGCTATGTTGGTACTTGCCTCCCGACCCAGCAGCAGCTCCGTGAGGATGCCCCGCGGC
 CCCAGTGCCAGGGGAAGAAGGGGAGACCCACCGTGTACGCCAGGGGTGGGCAAGGCCAGGTCACCAA
 ACCCATGTCTGTCTCTTCCAACACCAGGCGGAACGAAGATGGGTTGGGGAGCCGAGGGCGGGCATCT
 CCGGATCCCCTCTGACCCGGTGGACCAAGTCTTACACTCCTTATTGGGCGATCAAGACGGTGCTTACC
 TGTTCCGAACCTTCTGGAGAGGGAGAAATGCGTGGATACCTTAGACTTCTGGTTTGCCTGCAATGGATT
 CAGGCAGATGAACCTGAAGGATACCAAACTTTACGAGTAGCCAAAGCGATCTACAAAAGGTACATTGAG
 AACAACAGCATTGTCTCCAAGCAGCTGAAGCCTGCCACCAAGACCTACATAAGAGATGGCATCAAGAAGC
 AGCAGATTGATCCATCATGTTTGACCAGGCGCAGACCGAGATCCAGTCGGTGATGGAGGAAAATGCCTA
 CCAGATGTTTTGACTTCTGATATATACCTCGAATATGTGAGGAGTGGGGGAGAAAACACAGCTTACATG
 AGTAATGGGGACTCGGGAGCCTAAAGGTGCTGTGGCTATCTCCACCTTGAATGAAGAAGAGGAGT
 GGACTTGTGCCGACTTCAAGTGCAAACCTTCGCCAACCGTGGTTGGCTTGTCCAGCAAACTCTGAGGGC
 CACGGCGAGTGTGAGGTCCACGGAACTGTTGACAGTGGATACAGGTCTTCAAGAGGAGCGATCCTGTT
 AATCCTTATCACATAGGTTCTGGCTATGTCTTGCACCAGCCACCAGCGCAACGACAGTGAGATATCCA
 GTGATGCGCTGACGGATGATTCCATGTCCATGACGGACAGCAGTGTAGATGGAATTCCTCCTTATCGTGT
 GGGCAGTAAGAAACAGCTCCAGAGAGAAATGCATCGCAGTGTGAAGGCCAATGGCCAAGTGTCTACCT
 CATTTCGGAGAACCACCGCTGCCAAGGAGATGACCCCGTGAACCCGCCACCTTTGCAGCTGAGC
 TGATCTCGAGGCTGGAAGCTGAAGTGGAGTGGAGAGCCACAGCCTGGAGGAGCCCTGCAGTGCAGCA
 GATCCGAGAGGATGAAGAGAGAGAGGGCTCCGAGCTCACACTCAATTTCGGGGAGGGGGCCCCACGCAG
 CACCCCTCTCCCTACTGCCCTCCGGCAGCTACGAGGAAGACCCGACAGCATACTGGACGATCACCTGT
 CCAGGGTCTCAAGACCCTGGCTGCCAGTCTCCGGGCGTAGGCCGTATAGCCCTCGTCCCGCTCCCC
 GGACCACCACCACCACCATTTCGAGTACCACTCCCTGCTCCCGCCGGTGGCAAGCTGCCTCCCGCG
 GCCGCTCGCGGGCGCTGCCCTCCTCGGGGGCAAAGGCTTTGTGACCAAGCAGACGACGAAGCATG
 TCCACCACCACATCCACCACCATGCCCTCCCAAGACCAAGGAGGAGATCGAGGCGGAGGCCACGCA
 GCGGGTGCAGTCTTCTGCCCTGGGGCAGCGAGTATTACTGCTACTCGAAATGCAAAAGCCACTCCAAG
 GCTCCGGAACCATGCCAGCAGCAGTTTGGCGCAGCAGAGGCAGTACCTTGCCCAAACGCAATGGGA
 AAGGCACGGAGCCGGGCTGGCCCTGCCGCCAGGGAAGGAGGGGCCCCCGCGGAGCTGGGGCCCTGCA
 GCTTCCCGGGAGGAAGGAGACAGGTGCGAGGATGTCTGGCAGTGGATGCTGGAGAGTGAGCGGCAGAGC
 AAGCCCAAGCCCATAGTGCCCAAAGCACAAGAAAGGCCATCCCTTGGAGTCTGCCCGCTCGTCTCCAG
 GCGAACGAGCCAGCCGGCACCATCTGTGGGGGGCAACAGCGGGCACCCCGCACCCCCCGTGGCCA
 CCTGTTCAACCAGGACCTGCGATGCCTCCCCTGACCCACCCAAACAGCTGGCTCAGCTGGAGGAGGCC
 TGTGCGAGGCTAGCTGAGGTGTCGAAGCCCCAAAGCAGCGGTGCTGTGTGGCCAGTCAGCAGAGGGACA
 GGAATCATTGGCCACTGTTGACAGGGAGCCACACCTTCTCCAATCCAAGCCTGGCTCCAGAAGATCA
 CAAAGAGCCAAAGAACTGGCAGGTGTCACGCGCTCCAGCCAGTGAAGTGGTTGCACTTACTTTTTTC
 TGTGGGAAGAAATTCATACCGGAGGATGCTGAAGGCTCAGAGCTTGACCCTGGGCCACTTTAAAGAGC
 AGCTCAGCAAAAAGGAAATTATAGGTACTTCAAAAAGCAAGCGATGAGTTTGCCTGTGGAGCGGT
 GTTTGAGGAGATCTGGGAGGATGAGACGGTCTCCCGATGTATGAAGGCCGATTCTGGCAAAAGTGGAG
 CGGATCGAT

ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210931 protein sequence
 Red=Cloning site Green=Tags(s)

MSSAMLVTCLPDPSSSFREDAPRPPVPGEEGETPPCQPGVGKGQVTKPMSVSSNTRRNEDGLGEPEGRAS
 PDSPLTRWTKSLHSLLDGQDQAYLFRFTLEREKVDLDFWFACNGFRQMNLDKTKLRVAKAIYKRYIE
 NNSIVSKQLKPKATKYIRDGIKKQQIDSIMFDQAQTEIQSVMEENAYQMFLTSDIYLEYVRSGGENTAYM
 SNGGLGSLKVVCGYLP LTLNEEEEWTCADFKCKLSPTVVGLSSKTLRATASVRSTETVDSGYRSFKRSDPV
 NPYHIGSGYVFAPATSANDSEISSDALTDDSMSMTDSSVDGIPPYRVGSKKQLQREMHRSVKANGQVSLP
 HFPRTHRLPKEMTPVEPATFAAELISRLEKLELESRHSLEERLQQIREDEERESELTLSNREGAPTQ
 HPLSLLPSGSYEEDPQTILDDHLSRVLKTPGCQSPGVGRYSPRSRSPDHHSQYHSLPPGGKLP
 AASPGACPLLGGKGFVTKQTTHVHHYIHHHAVPKTEEIEAEATQRVHCFCPGGSEYCYCKSHSK
 APETMPSEQFGSGRSTLPKRNGKTEPLALPAREGGAPGGAGALQLPREGDRSQDVWQWMLSESRQS
 KPKPHSAQSTKKAYPLESARSSPGERASRHHLWGGNSGHPRTTPRAHLFTQDPAMPPLTPPNTLAQLEEA
 CRRLAEVSKPPKQRCVASQQRDRNHSATVQTGATPFSNPSLAPEDHKPKLAGVHALQASELVVITYFF
 CGEEIPYRRMLKAQSLTLGHFKEQLSKGNYRYFFKKASDEFACGAVFEEIWEDETVLPMYEGRILGKVE
 RID

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6201_e08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

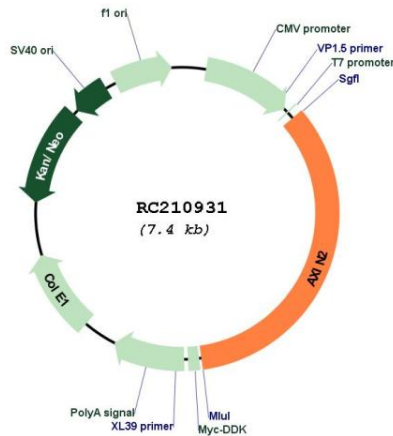


* The last codon before the Stop codon of the ORF

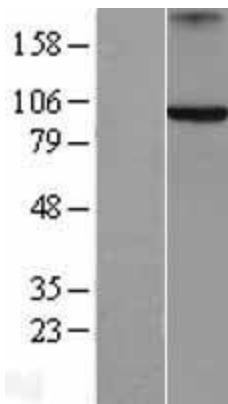
ACCN:	NM_004655
ORF Size:	2529 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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:	<ol style="list-style-type: none">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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_004655.1
RefSeq Size:	4241 bp
RefSeq ORF:	2532 bp
Locus ID:	8313
UniProt ID:	Q9Y2T1
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:	93.6 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]

Product images:


Circular map for RC210931



Western blot validation of overexpression lysate (Cat# [LY401475]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210931 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).