

Product datasheet for **RC210514**

Plakophilin 2 (PKP2) (NM_001005242) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Plakophilin 2 (PKP2) (NM_001005242) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Plakophilin 2
Synonyms:	ARVD9
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC210514 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAGCCCCGGCCCCAGCTGAGTACGGCTACATCCGGACCGTCTGGGCCAGCAGATCTGGGAC
 AACTGGACAGCTCCAGCCTGGCGCTGCCCTCCGAGGCCAAGCTGAAGCTGGCGGGGAGCAGCGGCCGCGG
 CGGCCAGACAGTCAAGAGCCTGCGGATCCAGGAGCAGGTGCAGCAGACCCTCGCCCGGAAGGCGCCGAGC
 TCCGTGGGCAACGGAAATCTTACCGAACCAGCAGTGTTCCTGAGTATGTCTACAACCTACACTTGGTTG
 AAAATGATTTTGTGGAGGCCGTTCCCTGTTCTAAAACCTATGACATGCTAAAGGCTGGCACAACCTGC
 CACTTATGAAGGTCGCTGGGGAAGAGGAACAGCACAGTACAGCTCCAGAAAGTCCGTGGAAGAAAGGTCC
 TTGAGGCATCCTCTGAGGAGACTGGAGATTTCTCCTGACAGCAGCCGGAGAGGGCTCACTACACGCACA
 GCGATTACAGTACAGCCAGAGAAGCCAGGCTGGGCACACCCTGCACCACCAAGAAAGCAGGCGGGCCGC
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 CAGCGCCACTTTGACACATACCAGACAGTACCAGCATGGCTCTGTTAGCGACACCGTTTTTACAGCA
 TCCTTGCCAACCCGGCCCTGCTCACGTACCCAGGCCAGGGACCAGCCGAGCATGGGCAACCTCTTGGA
 GAAGGAGAACCTGACGGCAGGGCTCACTGTGGGCAGGTGAGGCCGCTGGTGGCCCTGCAGCCCGTC
 ACTCAGAACAGGGCTTCCAGGCTCCTCTGGCATCAGAGCTCCTTCCACAGCACCCGACGCTGAGGGAAG
 CTGGGCCAGTGTGCGCGTGGATTCCAGCGGGAGGAGAGCGCACTTGACTGTGGCCAGGCGGCCGAGG
 GGAAGTGGGAATCTGCTCACTGAGAGAAGCACTTTCAGTACTCCAGCTGGGGAATGCAGACATGGAG
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 CTACTTTTCATACAGCAGAGTGTCTCCAGAAATCTGAAGCTCGAAGAGGGTTAACAGGCTTCGTGGC
 CCTCAAGCTTCTGAGCTCCTAAAAGTTTCCAGAAATGAGAATGAAGACGTTTCAGCGAGCTGTGTGGGGCCTTGAGA
 AACTTAGTATTTGAAGACAATGACAACAATTGGAGGTGGCTGAACTAAATGGGGTACCTCGGCTGCTCC
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 TTTTCTGGGTGGCCTGAAGGAGACTACCCAAAAGCAAATGGTTTGTCTCGATTTTGACATATTCTACAACG
 TCACTGGATGCCTAAGAAACATGAGTTCTGCTGGCGCTGATGGGAGAAAAGCGATGAGAAGATGTGACGG
 ACTCATTGACTCACTGGTCCATTATGTCAGAGGAACCATTGCAGATTACCAGCCAGATGACAAGGCCACG
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 CACAAGAAGCATCCTTAGGAGCTCTGCAGAACCTCACGGCCGGAAGTGGACCAATGCCGACATCAGTGGC
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 AAGCTGCTTCCGTCTTCTGTATTCTCTGTGGGCACACGGAAGTGCATCATGCCTACAAGAAGGCTCA
 GTTTAAGAAGACAGATTTTGTCAACAGCCGACTGCCAAAGCCTACCACTCCCTTAAAGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC210514 protein sequence
Red=Cloning site Green=Tags(s)

MAAPGAPAEYGYIRTVLGQQILGQLDSSSLALPSEAKLKLKLAGSSGRGGQTVKSLRIQEQQVQTLARKGRS
SVGNLHRTSSVPEYVYNLHLVENDFVGGSPVPKTYDMLKAGTTATYEGRWGRGTAQYSSQKSVEERS
LRHPLRRLEISPDSSPERAHYTHSDYQYSQRSQAGHTLHHQESRRAALLVPPRYARSEIVGVSRAQTTSR
QRHFDTYHRQYQHGSVSDTVFDSIPANPALLTYPRPGTSRSMGNLLEKENYLTAGLTVGQVRPLVPLQPV
TQNRASRSSHQSSFHSTRTLREAGPSVAVDSSGRRRAHLTVGQAAAGGSGNLLTERSTFTDSQLGNADME
MTLERAVSMLEADHMPPSRISAAATFIQHECFQKSEARKRVNQLRGILKLLQLLKVQNEVDVQRAVCGALR
NLVFEEDNDNKLEVAELNGVPRLLQVLKQTRDLETKKQITGLLWNLSSNDKLNLMITEALLTLTENIIP
FSGWPEGDYPKANGLLDFDIFYNYVTGCLRNMSAGADGRKAMRRCDGLIDSLVHYVRGTIADYQPDDKAT
ENCVCILHNL SYQLEAELPEKYSQNIYIQNRNIQTNNKSI GCFGSRSRKVKEQYQDVMPPEEKS NPKGV
EWLWHSIVIRMYLSLIAKSVRNYTQEASLGALQNLTAGSGPMPT SVAQTVVQKESGLQHTRKMLHVGDPS
VKKTAISLLRNLSRNL SLQNEIAKETLPDLVSIIPDTPVSTDLLIETTASACYTLNNI IQNSYQNARDLL
NTGGIQKIMAI SAGDAYASNKASKAASVLLYSLWAHTELHHAYKKAQFKKTDFVNSRTAKAYHSLKD

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6368_e02.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001005242

ORF Size: 2511 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_001005242.1](#), [NP_001005242.1](#)

RefSeq Size: 4307 bp

RefSeq ORF: 2514 bp

Locus ID: 5318

UniProt ID: [Q99959](#)

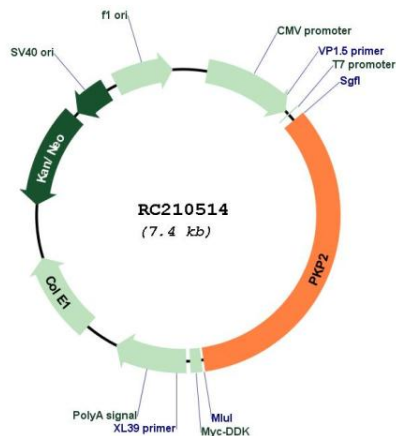
Cytogenetics: 12p11.21

Protein Pathways: Arrhythmogenic right ventricular cardiomyopathy (ARVC)

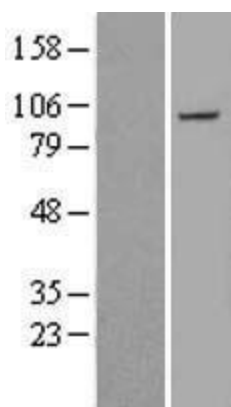
MW: 92.7 kDa

Gene Summary: This gene encodes a member of the arm-repeat (armadillo) and plakophilin gene families. Plakophilin proteins contain numerous armadillo repeats, localize to cell desmosomes and nuclei, and participate in linking cadherins to intermediate filaments in the cytoskeleton. This gene product may regulate the signaling activity of beta-catenin. Two alternately spliced transcripts encoding two protein isoforms have been identified. A processed pseudogene with high similarity to this locus has been mapped to chromosome 12p13. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC210514



Western blot validation of overexpression lysate (Cat# [LY423822]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210514 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).