

## Product datasheet for **RC201530**

### PAICS (NM\_001079524) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PAICS (NM_001079524) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAICS
Synonyms:	ADE2; ADE2H1; AIRC; PAIS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC201530 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGACAGCTGAGGACTGAACATTGGTAAAAAATTATATGAGGGTAAAAACAAAAGAAGTCTACGAAT  
 TGTTAGACAGTCCAGGAAAAGTCTCTGCAGTCCAAGGACCAGATTACAGCAGGAAATGCAGCTAGAAA  
 AAACACCTGGAAGGAAAAGCTGCAATCTCAAATAAAATCACCAGTTGTATTTTTTCAGTTATTACAGGAA  
 GCAGGTATTAATACTGCCTTCACAGAAAATGTGGGGAGACAGCTTTCATTGCACCCGAGTGTGAAATGA  
 TTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTCTTTTTCTCAAAGAAAATCCTGGTGTCAAGGA  
 AGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGATGATGCCAATAATGACCCACAGTGG  
 TCTGAGGAACAGCTGATTGCTGCAAAAATTTGCTTTGCTGGACTCTTATAGGCCAGACTGAAGTGGATA  
 TCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAAATCCTGGTTGCCCGAGAATTGTACACT  
 GGTGATATGAAGATTGAATTTGGTGTGATGTAAACCACCAAAGAAATTTCTTCTGCTGATGTTATTGAC  
 AATGATTCCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAAGACAAACAGTCTTATCGGGACC  
 TCAAAGAAGTAACCTCTGAAGGGCTCAAATGGTAAAGAAAAACTTTGAGTGGGTTGCAGAGAGAGTAGA  
 GTTGCTTTTGAATCAGAAAAGTCAAGTGCAGGGTTGTAGTGTGATGGGCTCTACTTCTGATCTTGGTCCAC  
 TGTGAAAAAATCAAGAAGGCCTGTGAAAATTTGGCATTCCATGTGAACTTCGAGTAACATCTGCGCATA  
 AAGGACCAGATGAAACTCTGAGGATTAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTGGC  
 AGTGGCAGGCAGAAGTAAAGTGGTGGGACAGTGTCTGGGAACATGCATATCCAGTTATCAGCTGT  
 CCTCCCCTCACACCAGACTGGGGAGTTCAGGATGTGTGGTCTTCTCTTCGACTACCCAGTGGTCTGGCT  
 GTTCAACCGTACTTTCTCAGAAGGATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATT  
 GGTATGGAGCAAACCTGCGAGCAAGCATTGTAACACATGGATTTCTTGAAGCAGGCTGACAAGAAAATC  
 AGAGAATGTAATTTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC201530 protein sequence  
 Red=Cloning site Green=Tags(s)

MATAEVLNIGKKLYEGKTKYVYELLDSPGKVLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLQE  
 AGIKTAFTRKCGETAFAIAPQCEMPIEWVCRRIATGSFLKRNPVKEGYFYPPKVELFFKDDANNDPQW  
 SEEQLIAAKFCFAGLLIGQTEVDIMSHATQAI FEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVID  
 NDSWRLWPSGDRSQKDKQSYRDLKEVTPEGLQMVKKNFEWAERVELLLKSESQCRVVLMGSTSDLGH  
 CEKIKKACGNFIPCELRVTSAHKGPDETLRIKAEYEGDIPTVFVAVAGRSNGLGPMVSGNTAYPVISC  
 PPLTPDWGVQDVWSSLRLPSGLGCSTVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKI  
 RECNL

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6323\\_f05.zip](https://cdn.origene.com/chromatograms/mk6323_f05.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_001079524

ORF Size: 1275 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM\\_001079524.2](#)

RefSeq Size: 3329 bp

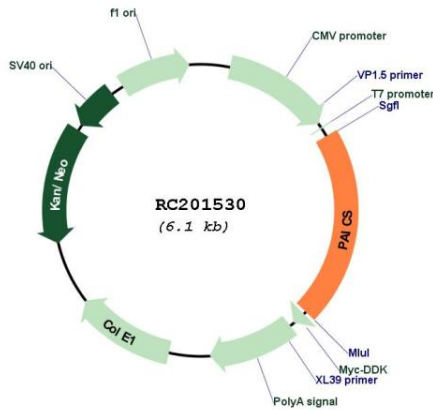
RefSeq ORF: 1278 bp

Locus ID: 10606

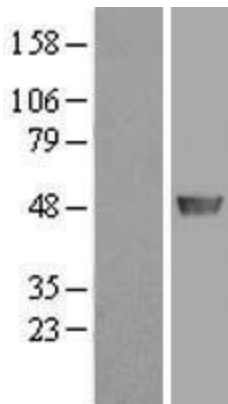
UniProt ID: [P22234](#)  
 Cytogenetics: 4q12  
 Protein Families: Druggable Genome  
 Protein Pathways: Metabolic pathways, Purine metabolism  
 MW: 47.1 kDa

**Gene Summary:** This gene encodes a bifunctional enzyme containing phosphoribosylaminoimidazole carboxylase activity in its N-terminal region and phosphoribosylaminoimidazole succinocarboxamide synthetase in its C-terminal region. It catalyzes steps 6 and 7 of purine biosynthesis. The gene is closely linked and divergently transcribed with a locus that encodes an enzyme in the same pathway, and transcription of the two genes is coordinately regulated. The human genome contains several pseudogenes of this gene. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

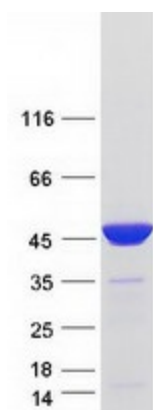
**Product images:**



Circular map for RC201530



Western blot validation of overexpression lysate (Cat# [LY416636]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC215225] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PAICS protein (Cat# [TP301530]). The protein was produced from HEK293T cells transfected with PAICS cDNA clone (Cat# RC201530) using MegaTran 2.0 (Cat# [TT210002]).