

Product datasheet for **RC215225**

PAICS (NM_006452) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAICS (NM_006452) 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:

>RC215225 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCGACAGCTGAGGTACTGAACATTGGTAAAAAATTATATGAGGGTAAAAACAAAAGAAGTCTACGAAT
 TGTTAGACAGTCCAGGAAAAGTCTCTGCAGTCCAAGGACCAGATTACAGCAGGAAATGCAGCTAGAAA
 AAACACCTGGAAGGAAAAGCTGCAATCTCAAATAAAATCACCAGTTGTATTTTTCAGTTATTACAGGAA
 GCAGGTATTAATACTGCCTTACCAGAAAATGTGGGGAGACAGCTTTCATTGCACCCGAGTGTGAAATGA
 TTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTCTTTTCTCAAAAAGAAATCCTGGTGTCAAGGA
 AGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGATGATGCCAATAATGACCCACAGTGG
 TCTGAGGAACAGCTGATTGCTGCAAAATTTTGGTTTCTGGACTTCTTATAGGCCAGACTGAAGTGGATA
 TCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAAATCCTGGTTGCCCCAGAATTGTACACT
 GGTGATATGAAGATTGAATTTGGTGTGATGTAAACCACCAAAGAAATTTGTTCTTGTGATGTTATTGAC
 AATGATTCCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCGGGACC
 TCAAAGAAGTAACCTCTGAAGGGCTCAAATGGTAAAGAAAAACTTTGAGTGGGTTGCAGAGAGAGTAGA
 GTTGCTTTTGAATCAGAAAAGTCAAGTGCAGGGTTGTAGTGTGATGGGCTCTACTTCTGATCTTGGTCA
 TGTGAAAAAATCAAGAAGGCCTGTGAAAATTTTGGCATTCCATGTGAACTTCGAGTAACATCTGCGCATA
 AAGGACCAGATGAAACTCTGAGGATTAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTGGC
 AGTGGCAGGCAGAAGTAAAGTGGTGGGACCAGTGTCTGGGAACATGCATATCCAGTTATCAGCTGT
 CCTCCCCTCACACCAGACTGGGGAGTTCAGGATGTGTGGTCTTCTCTTCGACTACCCAGTGGTCTGGCT
 GTTCAACCGTACTTTCTCAGAAGGATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATT
 GGTATGGAGCAAACCTGCGAGCAAGCATTGTAACACATGGATTTCTTGAAGCAGGCTGACAAGAAAATC
 AGAGAATGTAATTTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC215225 protein sequence
 Red=Cloning site Green=Tags(s)

MATAEVLNIGKKLYEGKTKYVYELLDSPGKVLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLQE
 AGIKTAFTRKCGETAFAIAPQCEMPIEWVCRRIATGSFLKRNPVKEGYFYPPKVELFFKDDANNDPQW
 SEEQLIAAKFCFAGLLIGQTEVDIMSHATQAI FEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVID
 NDSWRLWPSGDRSQKDKQSYRDLKEVTPEGLQMVKKNFEWAERVELLLKSESQCRVVLMGSTSDLGH
 CEKIKKACGNFGIPCELRVTSAHKGPDETLRIKAEYEGDIPTVFVAVAGRSNGLGPVMSGNTAYPVISC
 PPLTPDWGVQDVWSSLRLPSGLGCSTVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKI
 RECNL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6323_f05.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_006452

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.

RefSeq: [NM_006452.3](#)

RefSeq Size: 3350 bp

RefSeq ORF: 1278 bp

Locus ID: 10606

UniProt ID: [P22234](#)

Cytogenetics: 4q12

Domains: AIRC, SAICAR_synt

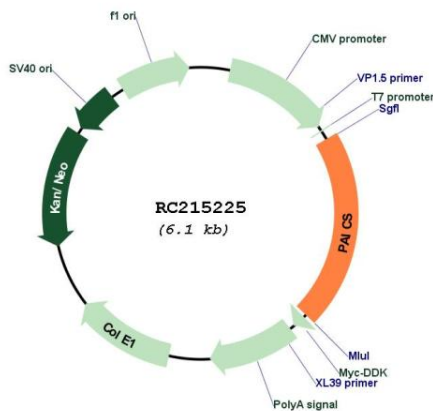
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Purine metabolism

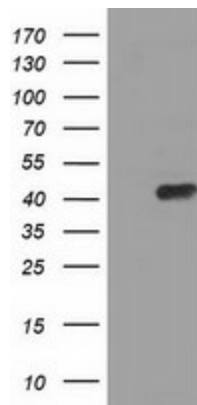
MW: 47.1 kDa

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]

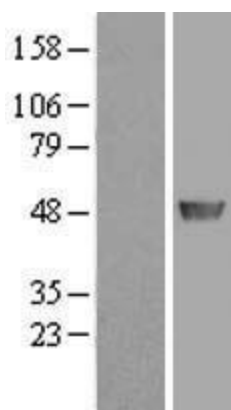
Product images:



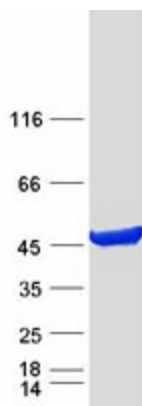
Circular map for RC215225



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PAICS (Cat# RC215225, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PAICS (Cat# [TA501470]). Positive lysates [LY416636] (100ug) and [LC416636] (20ug) can be purchased separately from OriGene.



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# [TP315225]). The protein was produced from HEK293T cells transfected with PAICS cDNA clone (Cat# RC215225) using MegaTran 2.0 (Cat# [TT210002]).