

Product datasheet for **SC323928**

PAICS (NM_001079524) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAICS (NM_001079524) Human Untagged Clone
Tag:	Tag Free
Symbol:	PAICS
Synonyms:	ADE2; ADE2H1; AIRC; PAIS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_001079524.1
 GAAAGCTGTATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGT
 AATGGGAGTAACGGACTTAACCTCATTCTCTTCAGAGCATTAGCCTTCATATGCCCT
 TCCTGCGATGCTTCCCCAGGCCGTCAAGACTTGAGTTCTGCCTCGCTTCCCGGCCGCGT
 CGCAGCCCTCAGCCCACTTAGGATAATGGCGACAGCTGAGGTAAGTGAACATTGGTAAAAA
 ATTATATGAGGGTAAAACAAAAGAAGTCTACGAATTGTTAGACAGTCCAGGAAAAGTCTCT
 CCTGCAGTCCAAGGACCAGATTACAGCAGGAAATGCAGCTAGAAAAAACCACTGGAAGG
 AAAAGTGCAATCTCAAATAAAATCACCAGTTGATTTTTTCAGTTATTACAGGAAGCAGG
 TATTAAGTGCCTTACCAGAAAATGTGGGGAGACAGCTTTCATTGCACCGCAGTGTGA
 AATGATCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTCTTTTCTCAAAGAAA
 TCCTGGTGTCAAGGAAGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTCAAGGA
 TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAATTTGCTT
 TGCTGGACTTCTTATAGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTAT
 ATTTGAAATACTGGAGAAATCCTGGTTGCCCGAGAATTGTACACTGGTTGATATGAAGAT
 TGAATTTGGTGTGATGTAACCACCAAAGAAATGTTCTTGTGATGTTATTGACAATGA
 TTCCTGGAGACTTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG
 GGACCTCAAAGAAGTAACCTCTGAAGGGCTCAAATGGTAAAGAAAAACTTTGAGTGGGT
 TGCAGAGAGAGTAGAGTTGCTTTTGAATCAGAAAGTCAAGTGCAGGTTGTAGTGTGAT
 GGGCTCTACTTCTGATCTTGGTCACTGTGAAAAAATCAAGAAGGCCTGTGGAAATTTGG
 CATTCCATGTGAACTTCGAGTAACATCTGCGCATAAAGGACCAGATGAAACTCTGAGGAT
 TAAAGCTGAGTATGAAGGGGATGGCATTCTACTGTATTTGTGGCAGTGGCAGGCAGAAG
 TAATGGTTTGGGACCAGTGTGCTGGGAACACTGCATATCCAGTTATCAGCTGTCTCC
 CCTCACACCAGACTGGGGAGTTCAGGATGTGTGGTCTTCTCTTCGACTACCCAGTGGTCT
 TGGCTGTTCAACCGTACTTTCTCCAGAAGGATCAGCTCAATTTGCTGCTCAGATATTTGG
 GTTAAGCAACCTTTGGTATGGAGCAAACCTGCGAGCAAGCATTGTAACACATGGATTTCT
 CTTGAAGCAGGCTGACAAGAAAAATCAGAGAATGTAATTTATAAGAAAGAATGCCATTGAA
 TTTTTAGGGGAAAAACTACAAATTTCTAATTTAGCTGAAGGAAAATCAAGCAAGATGAA



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AAGGTAATTTTAAATTAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAG
 ATCCATATTAATAAACATGAGCATCTAACCCCTCCTTTCTTAGGCTAGACACCAAGATAT
 TTCAGCCAGCCTTTATCATTCTCTTACTTTATCCTTTTTCTTAAAGTATTGGTGGTCAC
 TACTATTGAGTTTCTTCCCTAACACTGATTAATGATCTTAACTCCCTCAGCTAAAACAG
 GCATTACTGACTCCCAGCTATATTTCTCCAGACTTGCATTTTTTTTTTTTTTTTTTTGAGAC
 AGGGTCTCACTGTCGCCAGGCTGGAGTGCAGTGGCGTGATCTCAGTTCAGTCTGCTTT
 CCTCCTGGGCTCAAGCAGTTCTCCACCTCAGCCTCTCGACTAACAGGGACTATAATCT
 TGCAGCACCATGCCGAGCTAATTTTATTTTTGTAGAGATGAGCTCTCACTATGTCACCC
 AGGTTCTGCTCAAACCTGAACCTAGTAATTCTCTATCTCAGCCTCCCAAAGTGCTA
 GGGTTACAGACATGAGCCACTGTGCCTGTCTAGACTTGTACTTTCAACTGTCCATTTCTC
 CCTGTCTGTCCCATGGGCACTCATGAAAAACAGAATGCTCCCAACTTTATTCATCTTCC
 AAGCCTGTAGCTTTGGTATACTCACTGTTGCAAGTCAGAAGCTTGATTCATCATTGAT
 GTTTTTCTCAGTTTACATCTCACTCATACCAAGTCATGTTGGTGTTAATTTCTGATT
 AACCCTTGAATTTACCGTCTTCTCATCCTGTACAAAAGCCTCAAGTGAGGGTCAAATT
 CAACATTATCCTGATCTAGACAGCCCCATTCTCAATCCACCCTTTTCCAAGTTGATTGC
 CCAAGGACTTCTAAACAATAAACTCTTTTTGCACCACAGACTTCTTTGAAAATATACATG
 CTGTTGACCCTCTCTGTAGAAAACCGCACACATAAAACTTACCAACAGATTTTCATTGGTT
 CTTGGGTTCTCCCGAAGCCTATCCATGGTTTATAGATTAAGAATTGATGAGGTAGCTGGG
 CACAGTGGCTCACACCTACGATCACAGCACTTCGGGAGGCTGAAGCAAGCAGATCACTTG
 AGGTCAAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAATA
 CAAAAAGTAGCCAGCCGTGATGACAGGCACCTGTAATCCCAGCTACTCGGAGGCTGAGG
 CATGAGAATTGCTTGAACCCGGGAGGCGGAGGTTGCAGTGAAGCCTGGATCATGCCACTGC
 ACTCCAACCTGGGCAGCAGCAAGACTCTGTCTCAAAAAGGGGAAAAAAAAAATTGCTGA
 TGTGACCCATGAAGGGAACCTATTTTCTCGTAATTTTGGACTGCCACACATTGGTACCT
 TTAGTTCTCTGAAGGCCACGTTTTTATCATTAAAGACCTATTTGTTAGCTAGTAGAGCTT
 TATGTTGCTGTCCATGAAACCTTCTGTAACCACAGTGAACAAGTAGTTCTTTCTCTA
 TTGAATTATTAGGTCCAGAATAGAAGATGTCATTGTACACTTTATTTCCCTCACACTGTG
 TTATGCTCTGATGTGCTATGCTTAGCTATCTGTCAGAGATTAGTAAATTATAAACTCAT
 GTGTAATAAGTTTATATCTTATGCTAGTTTATAAGAACAATTAAGGACTTAGAA
 GATTAATAAAAAAAAAAAAAAAAAA

- Restriction Sites:** ECoRI-NOT
- ACCN:** NM_001079524
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_001079524.1](#), [NP_001072992.1](#)

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

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]
Transcript Variant: This variant (3) lacks an alternate in-frame exon in the CDS, compared to variant 1, resulting in a shorter protein (isoform 2), compared to isoform 1. Variants 2 and 3 encode the same isoform.