

Recombinant Human PAICS, His-tagged

Cat. No. PAICS-135H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	PAICS, 1-425aa, Human, His tag, E.coli
Species	Human
Source	E.coli
ProteinLength	1-425aa
Description	PAICS, also known as phosphoribosylaminoimidazole carboxylase, is an enzyme involved in nucleotide biosynthesis and in particular in purine biosynthesis. It catalyzes the conversion of 5"-phosphoribosyl-5-aminoimidazole(AIR) into 5"-phosphoribosyl-4-carboxy-5-aminoimidazole (CAIR) as described in the reaction. Recombinant human PAICS protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.
Form	Liquid. 20mM Tris-HCl buffer (pH8.0) containing 20% glycerol 0.1M NaCl,1mM DTT
Molecular Mass	49.5 kDa (448aa) confirmed by MALDI-TOF
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSMATAEVL NIGKKLYEGK TKEYYELLDSPGKVLLQSKD QITAGNAARK NHLEGKAAIS NKITSCIFQL LQEAGIKTAFTRKCGETAFAI APQCEMIPIE WVCRRITGS FLKRNPVGVE GYKFYPPKVELFFKDDANND PQWSEEQLIA AKFCFAGLLI GQTEVDIMSH ATQAIFEILEKSWLPQNCTL VDMKIEFGVD VTTKEIVLAD VIDNDSWRLW PSGDRSQQKDKQSYRDLKEV TPEGLQMVKK NFEWVAERVE LLLKSESQCR VVVLGMGSTSD

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LGHCEKIKKA CGNFGIPCEL RV TSAHKGPD ETLRIKAEYE GDGIPTVFVA
 VAGRSNGLGP VMSGNTAYPV ISCPPLTPDW GVQDVWSSLR LPSGLGCSTV
 LSPEGSAQFA AQIFGLSNHL VWSKLRASIL NTWISLKQAD KKIRECNL

Purity >90% by SDS - PAGE

Storage Can be stored at +4C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles.

Concentration 0.25 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name PAICS phosphoribosylaminoimidazole carboxylase, phosphoribosylaminoimidazole succinocarboxamide synthetase [Homo sapiens]

Official Symbol PAICS

Synonyms PAICS; phosphoribosylaminoimidazole carboxylase, phosphoribosylaminoimidazole succinocarboxamide synthetase; PAIS; multifunctional protein ADE2; ADE2H1; AIRC; AIR carboxylase; SAICAR synthetase; multifunctional protein ADE2H1; ADE2; MGC1343; MGC5024; DKFZp781N1372;

Gene ID 10606

mRNA Refseq NM_001079524

Protein Refseq NP_001072992

MIM 172439

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UniProt ID	P22234
Chromosome Location	4q12
Pathway	Inosine monophosphate biosynthesis, PRPP + glutamine =>IMP, organism-specific biosystem; Inosine monophosphate biosynthesis, PRPP + glutamine => IMP, conserved biosystem; Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of nucleotides, organism-specific biosystem;
Function	5-(carboxyamino)imidazole ribonucleotide mutase activity; ATP binding; identical protein binding; ligase activity; lyase activity; nucleotide binding; phosphoribosylaminoimidazole carboxylase activity; phosphoribosylaminoimidazolesuccinocarboxamide synthase activity; protein binding;

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