

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 SGLVPRGSH MGSMATAEVL NIGKKLYEGK TKEYELLDS PGKVLLQSKD QITAGNAARK NHLEGKAAIS NKITSCIFQL LQEAGIKTAF TRKCGETAFI APQCEMIPIE WVCRRATGS FLKRNPVKE GYKFYPPKVE LFFKDDANND PQWSEEQLIA AKFCFAGLLI GQTEVDIMSH ATQAIFEILE KSWLPQNCTL VDMKIEFGVD VTTKEIVLAD VIDNSWRLW PSGDRSQQKD KQSYRDLKEV TPEGLQMVKK NFEWVAERVE LLLKSESQCR VVVLGMSTSD

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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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