
Product Data Sheet

Product Name: PAICS Human
 Cat. No.: GP22045
 Batch No.: 1

Product Data

Purity	>98%	Source	E.coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	PAICS; Phosphoribosylaminoimidazole Carboxylase Phosphoribosylaminoimidazole; Succinocarboxamide Synthetase; PAIS; AIRC; ADE2; ADE2H1; AIR Carboxylase; Multifunctional Protein ADE2; Multifunctional Protein ADE2H1; SAICAR Synthetase.		
Amino Acid Sequence	<p>MGSSHHHHHH SSGLVPRGSH MGSMATAEVL NIGKKLYEGK TKEYYELLDS PGKVLLQSKD QITAGNAARK NHLEGKAAIS NKITSCIFQL LQEAGIKTAF TRKCGETAFI APQCEMPIE WVCRRRIATGS FLKRNPVKE GYKFYPPKVE LFFKDDANND PQWSEEQLIA AKFCFAGLLI GQTEVDIMSH ATQAIFEILE KSWLPQNCTL VDMKIEFGVD VTTKEIVLAD VIDNDSWRLW PSGDRSQQKD KQSYRDLKEV TPEGLQMVKK NFEWVAERVE LLLKSESQCR VVVLMSGTSD LGHCEKIKKA CGNFGIPCEL RVTSAHKGPD ETLRIKAEYE GDGIPTVFVA VAGRSNGLGP VMSGNTAYPV ISCPPLTPDW GVQDVWSSLR LPSGLGCSTV LSPEGSAQFA AQIFGLSNHL VWSKLRASIL NTWISLKQAD KKIRECNL.</p>		
Formulation	The PAICS solution (0.25mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 20% glycerol, 0.1M NaCl and 1mM DTT.		

Introduction

Phosphoribosylaminoimidazole Carboxylase (PAICS) is an enzyme involved in nucleotide biosynthesis and particularly in purine biosynthesis. PAICS is a bifunctional enzyme containing phosphoribosylaminoimidazole carboxylase activity at its N-terminal region and phosphoribosylaminoimidazole succinocarboxamide synthetase at its C-terminal region. PAICS catalyzes the conversion of 5'-phosphoribosyl-5-aminoimidazole(AIR) into 5'-phosphoribosyl-4-carboxy-5-aminoimidazole (CAIR) as described in the reaction. PAICS catalyzes steps six and seven of purine biosynthesis.

Stability

Caution: Product has not been fully validated for medical applications. For research use only.

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Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

PAICS Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 448 amino acids (1-425) and having a molecular mass of 49.5kDa. PAICS is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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