

Recombinant Human uridine monophosphate synthetase, His-tagged

Cat. No. UMPS-349H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	UMPS, 1-480aa, Human, His tag, E.coli
Species	Human
Source	E.coli
ProteinLength	1-480 a.a.
Description	Uridine 5"-monophosphate synthase, also known as UMPS, is a bifunctional enzyme that catalyzes the final two steps of the de novo pyrimidine biosynthetic pathway. Unlike prokaryotes, UMPS in eukaryotes combines the orotate phosphoribosyltransferase and the orotidine-5"-monophosphate (OMP) decarboxylase activities into a single protein. The union of these two enzymes is thought to stabilize the catalytic centers due to the low molar concentration of the protein in mammalian cells. Defects in this gene are the cause of hereditary orotic aciduria. Recombinant human UMPS protein, fused to His-tag at N-terminus, was expressed in E.coli.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 2M Urea, 20% glycerol
Molecular Mass	54.3 kDa (500aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MAVARAALGP LVTGLYDVQA FKFGDFVLKS GLSSPIYIDL RGIVSRPRLL SQVADILFQT AQNAGISFDT VCGVPYTALP

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LATVICSTNQ IPMLIRRKET KDYGTKRLVE GTINPGETCL IEDVVTSGS
 SVLETVEVLQ KEGLKVTDAL VLLDREQGGK DKLQAHGIRL HSVCTLKML
 EILEQQKKVD AETVGRVKRF IQENVFVAAN HNGSPLSIKE APKELSFGAR
 AELPRIHPVA SKLLRLMQKK ETNLCLSADV SLARELLQLA DALGPSICML
 KTHVDILNDF TLDVMKELIT LAKCHEFLIF EDRKFADIGN TVKKQYEGGI
 FKIASWADLV NAHVVPGSGV VKGLQEVGLP LHRGCLLIAE MSSTGSLATG
 DYTRAAVRMA EEHSEFVVG F ISGSRVSMKP EFLHLTPGVQ LEAGGDNLGQ
 QYNSPQEVIG KRGSDIIVG RGIISAADRL EAAEMYRCAA WEAYLSRLGV

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 1 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name [UMPS uridine monophosphate synthetase \[Homo sapiens \]](#)

Official Symbol UMPS

Synonyms UMPS; uridine monophosphate synthetase; uridine 5-monophosphate synthase; orotate phosphoribosyl transferase and orotidine 5 decarboxylase; OPRTase; OMPdecase; UMP synthase; orotate phosphoribosyltransferase; orotidine 5-phosphate decarboxylase; OPRT;

Gene ID [7372](#)

mRNA Refseq [NM_000373](#)

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Protein Refseq	NP_000364
MIM	613891
UniProt ID	P11172
Chromosome Location	3q13
Pathway	Drug metabolism - other enzymes, organism-specific biosystem; Drug metabolism - other enzymes, conserved biosystem; Fluoropyrimidine Activity, organism-specific biosystem; Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of nucleotides, organism-specific biosystem; Pyrimidine biosynthesis, organism-specific biosystem;
Function	lyase activity; orotate phosphoribosyltransferase activity; orotate phosphoribosyltransferase activity; orotidine-5-phosphate decarboxylase activity; orotidine-5-phosphate decarboxylase activity; transferase activity, transferring glycosyl groups;