

## Active Recombinant Human GUK1 protein, His-tagged (Bioactivity Validated)

**Cat. No.** GUK1-19H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant human GUK1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	GUK1, also known as GMK, belongs to the guanylate kinase family. This protein exists as a monomer that catalyzes the ATP-dependent conversion of GMP to GDP, thereby playing an essential role in the recycling of GMP. Via its catalytic activity, GUK1 is thought to participate in regulating the supply of guanine nucleotides to signal transduction pathways. Overexpression of GUK1 is associated with pituitary adenocarcinomas, suggesting that GUK1 is involved in tumorigenesis.
<b>Form</b>	Liquid. In 20mM Tris-HCl buffer(pH 8.0) containing 10% glycerol, 1mM DTT, 0.1M NaCl
<b>Bio-activity</b>	Specific activity is >100 units/mg and is defined as the amount of enzyme that convert 1.0 umole of GMP and ATP to GDP and ADP per minute at pH 7.5 at 37centigrade in coupled system with PK/LDH.
<b>Molecular Mass</b>	23.9 kDa (217aa), confirmed by MALDI-TOF
<b>AA Sequence</b>	MGSSHHHHHH SSGLVPRGSH MSGPRPVVLS GPSGAGKSTL LKRLQLQEHSG

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IFGFSVSHTT RNPRPGEENG KDYYFVTREV MQRDIAAGDF IEHAEFSGNL  
YGTSKVAVQA VQAMNRCVL DVDLQGVRNI KATDLRPIYI SVQPPSLHVL  
EQRLRQRNTE TEESLVKRLA AAQADMESK EPGLFDVVII NDSLDAQAYAE  
LKEALSEEIK KAQRTGA

**Purity** > 90% by SDS - PAGE

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

**Concentration** 1 mg/ml (determined by Bradford assay)

## GENE INFORMATION

**Gene Name** GUK1 guanylate kinase 1 [ Homo sapiens ]

**Official Symbol** GUK1

**Synonyms** GUK1; guanylate kinase 1; guanylate kinase; GMP kinase; GMK; FLJ42686; FLJ43710;

**Gene ID** 2987

**mRNA Refseq** NM\_000858

**Protein Refseq** NP\_000849

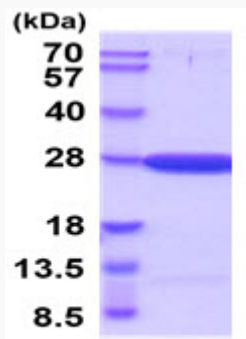
**MIM** 139270

**UniProt ID** Q16774

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<b>Chromosome Location</b>	1q32-q41
<b>Pathway</b>	Metabolic pathways, organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of nucleotides, organism-specific biosystem; Purine metabolism, organism-specific biosystem; Purine metabolism, conserved biosystem; Synthesis and interconversion of nucleotide di- and triphosphates, organism-specific biosystem;
<b>Function</b>	ATP binding; guanylate kinase activity; kinase activity; nucleotide binding; transferase activity;
 <p>(kDa) 70 57 40 28 18 13.5 8.5</p> <p>15% SDS-PAGE (3ug)</p>	

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