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

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

SPECIFICATION

Product Overview	Recombinant human GUK1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
Description	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.
Form	Liquid. In 20mM Tris-HCl buffer(pH 8.0) containing 10% glycerol, 1mM DTT, 0.1M NaCl
Bio-activity	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.
Molecular Mass	23.9 kDa (217aa), confirmed by MALDI-TOF
AA Sequence	MGSSHHHHHH SSGLVPRGSH MSGPRPVVLS GPSGAGKSTL LKRLLQEHSG

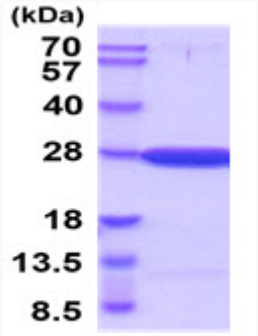
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	IFGFSVSHTT RNPRPGEENG KDYYFVTREV MQRDIAAGDF IEHAEFSGNL YGTSKVAVQA VQAMNRICVL DVDLQGVRNI KATDLRPIYI SVQPPSLHVL EQRLRQRNTE TEESLVKRLA AAQADMESSK EPGLFDVVII NDSLDQAYAE LKEALSEEIK KAQRTGA
Purity	> 90% by SDS - PAGE
Storage	Can be stored at +4centigrade 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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Chromosome Location	1q32-q41
Pathway	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;
Function	ATP binding; guanylate kinase activity; kinase activity; nucleotide binding; transferase activity;
	 15% SDS-PAGE (3ug)

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