

Recombinant human Guanylate kinase 1/GUK1 protein

Catalog Number: ATGP3432

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-197aa

UniProt No.

Q16774

NCBI Accession No.

NP_000849

Alternative Names

Guanylate kinase, GMK, GMP kinase, GMPK

PRODUCT SPECIFICATION

Molecular Weight

23.9 kDa (217aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT, 0.1M NaCl

Purity

> 90% by SDS-PAGE

Biological Activity

Specific activity is >100unit/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 37C in coupled system with PK/LDH.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

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

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signal transduction pathways. Overexpression of GUK1 is associated with pituitary adenocarcinomas, suggesting that GUK1 is involved in tumorigenesis. Recombinant human GUK1 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

MGSSHHHHHH SGLVPRGSH MSGPRPVVLS GPSGAGKSTL LKRLQEHSG IFGFSVSHTT RNPRPGEENG KDYYFVTREV
MQRDIAAGDF IEHAEFSGNL YGTSKVAVQA VQAMNRCVL DVDLQGVVNI KATDLRPIYI SVQPPSLHVL EQRLRQRNTE
TEESLVKRLA AAQADMESK EPGLFDVVII NDSLQAYAE LKEALSEEIK KAQRTGA

General References

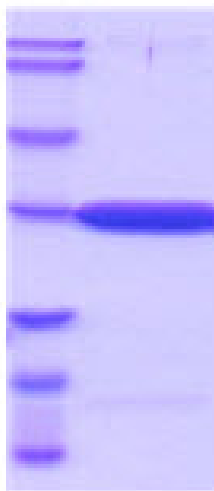
Da Rocha AA., et al. (2006) Pituitary. 9(2):83-92.

Brady WA., et al. (1996) J Biol Chem. 271(28):16734-40

DATA

SDS-PAGE

(kDa)
70
57
40
28
18
13.5
8.5



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)