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**Product Data Sheet**

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Product Name: GUK1 Human, Active

Cat. No.: GP22527

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	GMK; GMP kinase.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MSGPRPVVLS GPSGAGKSTL LKRLLEHSG IFGFSVSHTT RNPRPGEENG KDYYFVTREV MQRDIAAGDF IEHAEFSGNL YGTSKVAVQA VQAMNRCVL DVDLQGVVNI KATDLRPIYI SVQPPSLHVL EQRLRQRNTE TEESLVKRLA AAQADMESSEK EPGLFDVVII NDSLQAYAE LKEALSEEIK KAQRTGA.		
Formulation	The GUK1 1mg/ml protein solution contains 20mM Tris-HCl pH-8, 1mM DTT, 0.1M NaCl and 10% Glycerol.		

**Introduction**

GUK1 is part of the guanylate kinase family. GUK1 occurs as a monomer that catalyzes the ATP-dependent conversion of GMP to GDP, thus takes an important part in the recycling of GMP. Through its catalytic activity, GUK1 functions in regulation of the supply of guanine nucleotides to signal transduction pathways. GUK1 overexpression is related with pituitary adenocarcinomas, implicating that GUK1 has a role in tumorigenesis.

**Biological Activity**

Specific activity is > 100 units/mg and is defined as the amount of enzyme that converts 1.0 umole of GMP and ATP to GDP and ADP per minute at pH 7.5 at 37°C in a coupled system with PK/LDH.

**Stability**

Store at 4°C if the 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%

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

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HSA or BSA). Please avoid freeze thaw cycles.

### Background

GUK1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 217 amino acids (1-197 a.a.) and having a total molecular mass of 23.9 kDa. GUK1 is fused to a 20 amino acid His Tag at N-terminus and is purified by proprietary chromatographic techniques.

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