hGuanylatkinase, His-tag protein

Cat. no. P2020-107

Product Information

Protein:	hGuanylatkinase, His-tag (~ 24.6 kDa)
Uniprot#:	Q16774
Sequence:	MSGPRPVVLSGPSGAGKSTLLKRLLQEHSGIFGFSVSHTTRNPRPGEENGKDYYFVTREV MQRDIAAGDFIEHAEFSGNLYGTSKVAVQAVQAMNRICVLDVDLQGVRNIKATDLRPIYI SVQPPSLHVLEQRLRQRNTETEESLVKRLAAAQADMESSKEPGLFDVVIINDSLDQAYAE LKEALSEEIKKAQRTGA
	Methionine at pos. 1 might be present due to cloning constraints, N-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in *Rosetta2 (DE3)*.
Tag(s):	His-tag, N-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4
	Liquid, stored and shipped at -80 °C.
Purity:	> 95 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications.

Background Information:

Human Guanylate kinase is the only known enzyme which catalyzes the ATP-dependent phosphorylation of cellular guanosine monophosphate (GMP) into guanosine diphosphate (GDP). Process is crucial for GMP and cyclic guanosine monophosphate (cGMP) recycling, essential for cellular viability and proliferation. It occurs in low eukaryotes, prokaryotes as well as in vertebrates. Human Guanylate kinase is a monomeric protein that is highly conserved and made up of approximately 200 amino acids. This enzyme belongs to the family of transferases with a phosphate group as phosphotransferases. The hGuanylatekinase is essential for producing the nucleotide building blocks of DNA, RNA. That enzyme is indispendable in metabolic activation of antiviral prodrugs. The hGuanylatekinase structure consists of three particular domains that are dynamic: LID, GMP-binding, and CORE domain.
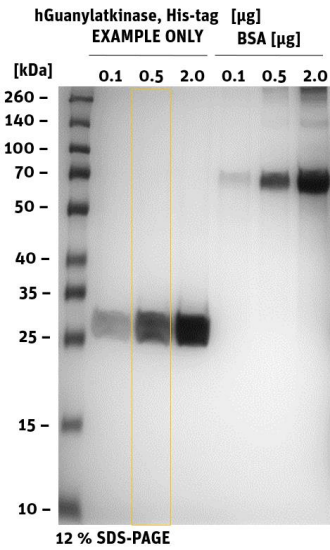

Structural model of the hGuanylatkinase (pdb code: 6NUI) .

Product Information

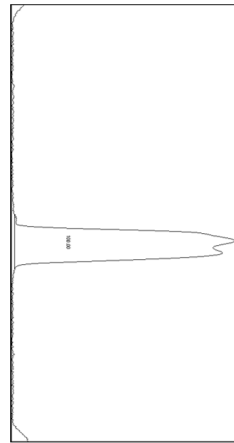### Quality Information (provided for each lot):

SDS-PAGE/Coll.Coomassie

Histogram (of marked lane in gel picture)

	Area	Percent
1	24597.882	100