

Active Recombinant *P. chrysogenum* APSK Protein, His tagged

Cat. No. APSK-03P **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Active Recombinant *P. chrysogenum* APSK Protein with His tag was expressed in *E. coli*.

Species

P. chrysogenum

Source

E. coli

ProteinLength

1-211 aa

Description

Sulfur metabolism is essential to all organisms. Inorganic sulfate is sequentially activated by ATP sulfurylase and adenosine 5'-phosphosulfate kinase (APSK). ATP sulfurylase converts ATP to adenosine-5'-phosphosulfate (APS). APSK subsequently phosphorylates APS at the 3' site to generate 3'-phosphoadenosine-5'-phosphosulfate (PAPS). PAPS is the sulfur donor required for all sulfotransferase reactions in humans and is also the sulfur source for synthesis of cysteine, methionine and glutathione. The *P. chrysogenum* APSK is a homodimer that undergoes a temperature-dependent reversible dissociation into inactive monomers. The kinetic mechanism of this enzyme is strictly ordered with ATP bound before APS and PAPS dissociating before MgADP. APS is reported as a potent substrate inhibitor with the formation of a dead-end E·MgADP·APS ternary complex as the cause of the substrate inhibition. The recombinant *P. chrysogenum* APSK is required for in vitro PAPS synthesis and the enzymatic activity was measured using a phosphatase-coupled method.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Molecular Mass	25 kDa
Bio-activity	Measured by its ability to phosphorylate adenosine 5'-phosphosulfate (APS). The specific activity is > 100 pmol/min/μg, as measured under the described conditions, and is subject to known limitations imposed by a factor of coupling rate.
N-terminal Sequence Analysis	Ser2
Endotoxin	< 1 EU/μg by LAL
Purity	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain at 5 μg per lane.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.
Storage Buffer	Supplied as a 0.2 μm filtered solution in Tris and NaCl.
GENE INFORMATION	
Official Symbol	APSK
Synonyms	APSK

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