

## Polyphosphate glucokinase / ppgK - Purified

<b>Catalog No.:</b>	PA1267X
<b>Quantity:</b>	500
<b>Background:</b>	Polyphosphate Glucokinase catalyzes the phosphorylation of glucose using either inorganic polyphosphate or ATP as the phosphoryl donor. The phosphorylation of glucose plays a significant role in the creation of intermediates for oligosaccharide synthesis
<b>Uniprot ID:</b>	<a href="#">D7GI59</a>
<b>NCBI:</b>	<a href="#">YP_003687229.1</a>
<b>GeneID:</b>	<a href="#">9282160</a>
<b>Source:</b>	<i>P. shermanii</i> , <i>Propionibacterium shermanii</i>
<b>Format:</b>	<b>State:</b> Sterile filtered white lyophilized (freeze-dried) powder. <b>Buffer System:</b> Contains 100 mM potassium phosphate, pH 6.8, and 25 mM sodium polyphosphate (Graham's salt) <b>Reconstitution:</b> Reconstitute the lyophilized PPGK in 1-10 ml deionized water.
<b>Description:</b>	Polyphosphate Glucokinase purified circa 100 fold. Free of all polyphosphate kinase activity. Isoelectric point = 5.8. <b>Biological Activity:</b> The specific activity is 3.6 U/mg. Unit definition: 1 Unit of activity = the amount of PPGK required to convert 1 $\mu$ mol glucose to glucose-6 phosphate per minute at 30°C and pH 7.4, in phosphate buffer using polyphosphate as phosphate donor. <b>Specific Activity:</b> 10-40 U/mg <b>Molecular weight:</b> 63 kDa Native MW = 63 kD, subunit MW = 30kD
<b>Storage:</b>	One year from despatch when stored at -20°C, three weeks at room temperature. Please avoid freeze-thaw cycles.
<b>General Readings:</b>	<ol style="list-style-type: none"><li>1. Polyphosphate glucokinase. <i>Prog Mol Subcell Biol</i> 1999;23:101-25</li><li>2. Hsieh PC, Kowalczyk TH, Phillips NF. Kinetic mechanisms of polyphosphate glucokinase from <i>Mycobacterium tuberculosis</i>. <i>Biochemistry</i>. 1996 Jul 30;35(30):9772-81. PubMed PMID: 8703950.</li><li>3. Kowalczyk TH, Horn PJ, Pan WH, Phillips NF. Initial rate and equilibrium isotope exchange studies on the ATP-dependent activity of polyphosphate Glucokinase from <i>Propionibacterium shermanii</i>. <i>Biochemistry</i>. 1996 May 28;35(21):6777-85. PubMed PMID: 8639629.</li><li>4. Hsieh PC, Shenoy BC, Samols D, Phillips NF. Cloning, expression, and characterization of polyphosphate glucokinase from <i>Mycobacterium tuberculosis</i>. <i>J Biol Chem</i>. 1996 Mar 1;271(9):4909-15. PubMed PMID: 8617763.</li><li>5. Kowalczyk TH, Phillips NF. Determination of endopolyphosphatase using polyphosphate glucokinase. <i>Anal Biochem</i>. 1993 Jul;212(1):194-205. PubMed PMID: 8396361.</li></ol>

6. Kowalczyk TH, Szymona O. Glucose determination using immobilized polyphosphate glucokinase. *Anal Biochem.* 1991 Sep 2;197(2):326-32. PubMed PMID: 1664665.