Pyrophosphatase, Inorganic (Yeast，0.1 U/μl)

DD4103PCEN

Version 23.1

Product Description

Pyrophosphatase, Inorganic (inorganic pyrophosphatase) is an enzyme encoded by yeast DNA expressed in the recombinant *E.coli*, which can catalyze the hydrolysis of inorganic pyrophosphate into orthophosphate: $P_2O_7^{4-} + H_2O \rightarrow 2\ HPO_4^{2-}$. Under natural conditions, inorganic pyrophosphatases provide thermodynamic power for the biosynthesis of proteins, DNA, and RNA, and play a role in biotransformation processes such as lipid metabolism, calcium absorption, and bone formation. In nucleic acid amplification tests, this product can hydrolyze inorganic pyrophosphate generated during the reaction to prevent its inhibition against the reaction and promote the translation of the reaction equilibrium towards product generation.

Components

Component	DD4103PCEN-01 (100 U)	DD4103PCEN-02 (500 U)	DD4103PCEN-03 (2 KU)
Pyrophosphatase, Inorganic (Yeast，0.1 U/μl)	1 ml	5 ml	20 ml

Storage

Store at -30 ~ -15℃ and transport at ≤ 0℃.

Product Information

Product Name	Pyrophosphatase, Inorganic (yeast, 0.1 U/μl)
Source	Recombinant *E.coli*
Activity	0.1 U/μl
Unit Definition	Under standard reaction conditions, one unit is defined as the amount of enzyme required to catalyze the hydrolysis of pyrophosphate (PPi) per minute to produce 1 μmol of orthophosphate (Pi).
Optimum Temperature	The optimal reaction temperature is 25℃ and is active at 16 ~ 37℃.
Cofactor	Mg^{2+}
Storage Buffer	20 mM Tris-HCl (25℃, pH 8.0), 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 50% glycerol
Storage Conditions	-30 ~ -15℃

Application

1. Optimize nucleic acid amplification reactions, improve the reaction efficiency and increase the nucleic acid yield.
2. Promote the synthesis of proteins and nucleic acids.
3. Used in other applications in the presence of PPi interference. Catalyze the degradation of PPi to eliminate its interference with the reaction.

Notes

1. For research use only. Not for use in diagnostic procedures.
2. The enzyme is active in a variety of reaction buffers and is usually added directly to the target reaction system.
3. The amount of this enzyme requires optimization in different experiments and is usually adjusted within the range of 0.05 to 1 U/ml.