Active Recombinant S. tuberosum Apyrase Protein

Cat. No. Apyrase-08S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant S. tuberosum Apyrase Protein Isolated from a strain of E. coli that carries the coding sequence for potato S. tuberosum apyrase.
Species	S. tuberosum
Source	E.coli
Description	Apyrase is a highly active ATP-diphosphohydrolase that catalyzes the sequential hydrolysis of ATP to ADP and ADP to AMP releasing inorganic phosphate.
Bio-activity	3,000 units/mg
Molecular Mass	47 kDa
Applications	Highly efficient degradation of ATP to AMP. Removal of deoxynucleotides in DNA pyrosequencing between cycles. Conversion of 5´ triphosphorylated RNA to ligatable monophosphorylated form that can be used for 5´ RNA adaptor ligation. Conversion of 5´ triphosphorylated RNA to 5´ exonuclease XRN-1bsensitive monophosphorylated RNA.
Notes	1. Apyrase has a higher ratio of activity for ATP:ADP (14:1). 2. Apyrase is a calcium-activated enzyme. It is approximately 50% active when Mg2+ substitutes Ca2+ in Apyrase Reaction Buffer. 3. As a metal-dependent enzyme, Apyrase can be inhibited by EGTA and EDTA. 4. The activity of Apyrase is approximately 30% in NEBuffers r1.1, r2.1, r3.1 and rCutSmart Buffer. 5. Apyrase does not remove 5'caps from

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	eukaryotic mRNA.
Unit Definition	One unit is defined as the amount of enzyme that catalyses the release of 1 µmol of inorganic phosphate from ATP (1 mM) in 1X Apyrase Reaction Buffer in 1 minute at 30 centigrade in a total reaction of 50 µL.
Reaction Buffer	1× Apyrase Reaction Buffer, Incubate at 30 centigrade. 1× Apyrase Reaction Buffer: 20 mM MES, 50 mM NaCl, 5 mM CaCl2, 1 mM DTT, 0.05% Tween 20, (pH 6.5 at 25 centigrade)
Storage Buffer	20 mM MES, 50 mM NaCl, 0.1 mM CaCl2, 1 mM DTT, 0.1% Tween 20, 50% Glycerol, pH 6.5 at 25 centigrade.
Heat Inactivation	65 centigrade for 20 minutes
Feature	Enzyme of highest purity, efficiency and quality Tested in updated range of more stringent quality controls Supplied at 10-fold higher concentration in the optimized storage buffer Supplied with new optimal reaction buffer Provided with updated, detailed characterization Discovered and characterized a new function: the ability to convert 5' triphosphorylated RNA to monophosphorylated form, which can be ligated or removed by 5' exonuclease

GENE INFORMATION

Official Symbol	Apyrase
Synonyms	Apyrase; 9000-95-7; 3.6.1.5

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