

# Apyrase



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M0393S 036120813081

## M0393S



10,000 milliunits Lot: 0361208 Exp: 8/13  
50,000 milliunits/ml Store at -20°C

**Description:** Apyrase is an ATP diphosphohydrolase. It catalyses the removal of the gamma phosphate from ATP and the beta phosphate from ADP. The phosphate from AMP is not removed.

10 units = 10,000 milliunits

**Source:** This preparation is purified from *K. lactis* containing a clone of the potato apyrase gene (1).

Supplied in: 10 mM Tris Acetate (pH 6.5), 50 mM NaCl, 0.1 mM CaCl<sub>2</sub>, 0.1% Tween 20, 0.1 mM DTT and 50% glycerol.

### Reagents Supplied with Enzyme:

10X Succinate Buffer for control purposes

**Unit Definition:** One unit is defined as the amount of enzyme that catalyzes the conversion of 1 μmol of ATP to ADP in one minute at 30°C in a total reaction volume of 50 μl.

**Unit Assay Conditions:** 1X Succinate Buffer, 40 mM sodium succinate (pH 6.5), 4 mM CaCl<sub>2</sub> and 1 mM ATP at 30°C.

### Quality Controls Assays

**Phosphatase Contamination:** After incubation of 1 unit of Apyrase with 0.05 μmol p-nitrophenol phosphate for 4 hours at 37°C, no phosphatase activity could be detected by spectrophotometric analysis.

**Nuclease Contamination:** Incubation of 1 units of Apyrase for 6 hours in the recommended assay buffer with Lambda-HindIII Digest and 1 μg pUC19 DNA Ladder revealed no detectable endonuclease activity as determined by agarose gel electrophoresis.

**Exonuclease Activity:** Incubation of 50 μl reaction containing 1 units of Apyrase with 1 μg of a mixture of single and double-stranded [<sup>3</sup>H] *E. coli* DNA (200,000 cpm/μg) for 4 hours at 37°C released < 0.5% of the total radioactivity.

**Note:** The activity of Apyrase at pH 7.5 in a Tris Buffer is approximately 80% of the activity at pH 6.5. Magnesium can substitute for calcium in the reaction. The ratio of ATPase:ADPase is 12:1 with this preparation of Apyrase.

### Reference:

1. Ganatra, M., Hough, D. and Taron, C.H., unpublished observations.

CERTIFICATE OF ANALYSIS

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