

INTRODUCTION

Cap-Clip™ Acid Pyrophosphatase was developed as an improvement over Tobacco Acid Pyrophosphatase (TAP). Cap-Clip Acid Pyrophosphatase can be used unit for unit in any previously developed protocol that utilized TAP. The Reactions Buffers for the two enzymes are identical.

Cap-Clip Acid Pyrophosphatase is a plant-derived enzyme that hydrolyzes various pyrophosphate bonds, including the pyrophosphate bonds of the 5'-terminal m⁷GpppG "cap" of eukaryotic messenger RNAs, as well as 5' cap structures on many small nuclear RNAs (snRNAs), heterogeneous nuclear RNAs and some viral RNAs. Complete hydrolysis of such capped RNAs generates RNA that has a 5'-monophosphate group.

With lot to lot consistency, absence of critical contaminants and a dependable inventory, Cap-Clip Acid Pyrophosphatase replaces all TAP needs.

MATERIALS

Materials Supplied



Store at -20°C in a freezer without a defrost cycle. Do not store at -70°C.

Cap-Clip™ Acid Pyrophosphatase (100 units)	
Component	Volume
Cap-Clip™ Acid Pyrophosphatase, 5 U/μl in 50% glycerol, 10 mM Tris-HCl, pH 7.5, 100 mM NaCl, 1 mM dithiothreitol, 0.1 mM EDTA and 0.01% Triton® X-100.	20 μl
10X Cap-Clip™ Acid Pyrophosphatase Reaction Buffer 0.5 M NaOAc, pH 6.0, 10 mM EDTA, 1% β-mercaptoethanol and 0.1% Triton X-100.	250 μl

SPECIFICATIONS

Unit Definition

One unit of Cap-Clip Acid Pyrophosphatase releases one nanomole of inorganic phosphate from m⁷GpppG in 30 minutes at 37°C under standard assay conditions.

Contaminating Activity Assays

Cap-Clip Acid Pyrophosphatase is free of detectable RNase, DNase and phosphatase activities.

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