Creative Enzymes®

Native Penicillium citrinum Nuclease P1

Cat. No. NATE-0491

Lot. No. (See product label)

Introduction

Description Nuclease P1 from Penicillium citrinum is a zinc-dependent endonuclease that exhibits increased activity in the presence of low concentrations of urea.

Applications Nuclease P1 from Penicillium citrinum has been used in a study to assess crystal structures using ammonium sulphate or polyethylene glycol 4000 as a precipitating agent. It has also been used in a study to investigate a method for the direct sequence analysis 20-25 nucleotides from the terinini of 5′ or 3′ end group labeled RNA. Nuclease P1 is used to improve the sensitivity of a 32P-labeling method for the detection of DNA adducts. The enzyme has an optimal temperature of approximately 70 oc, but for a long incubation, a temperature below 60 oc is more suitable. It is stable in the pH range of 5-8.

Synonyms Endonuclease P1; EC 3.1.30.1; 54576-84-0; Nuclease P1; P1 nuclease

Product Information

Source Penicillium citrinum

Form lyophilized powder

EC Number EC 3.1.30.1

CAS No. 54576-84-0

Molecular Weight 42-50 kDa

Activity > 200 units/mg protein (E1%/280, 3′-5′-Phosphodiesterase)

Unit Definition 3'-5'-Phosphodiesterase: One unit will liberate 1.0 μmole of acid soluble nucleotides from RNA per min at pH 5.3 at 37°C. 3'-Nucleotidase: One unit will hydrolyze 1.0 μmole of orthophosphate from 3'-AMP per min at pH 7.2 at 37°C.

Usage and Packaging

Package vial of > 250 units (using RNA substrate)

Storage and Shipping Information

Storage 2-8°C