

Native Streptomyces griseus Pronase

Cat. No. NATE-0997

Lot. No. (See product label)

Introduction

Description Pronase is a mixture of several nonspecific endo- and exoproteases that digest

proteins down to single amino acids.

Applications Use Pronase to completely hydrolyze proteins in research applications. Pronase is

used for the degradation of proteins during the isolation of DNA and RNA, such as in the extraction of phage DNA or the isolation of plasmid DNA. It is not necessary to let pronase self-digest prior to use. It is also used in histochemistry and cell culture for tissue dissociation in conjunction with collagenase and trypsin, and for

the production of glycopeptides from purified glycoproteins.

Synonyms non-specific protease

Product Information

Source Streptomyces griseus

Form Lyophilized powder

EC Number EC 3.4.24.4

CAS No. 70851-98-8

Activity ~7.0 units/mg protein (at 40°C with casein as the substrate, pH 7.5, equivalent to

approximately 1270 PU/mg or approximately 25 PUK/mg.)

pH Stability 6.0 - 9.0

Optimum pH 7.0 - 8.0

Optimum temperature 35–40 °C

Specificity Pronase has a broad specificity, breaking down virtually all proteins into their

individual amino acids; resolves carboxylic acids and alcohols.

Stabilizers Calcium ions: Calcium is highly effective in preventing pronase activity. The activity

of a diluted solution containing 0.01–0.1 M calcium was stable over 24 hours at neutral pH at 4 to 8 °C. Pronase is also protected from heat inactivation by low

levels of calcium.

Unit Definition A unit of non-specific protease activity increases the rate of release of folin-positive

amino acids and peptides from casein, at +40 °C and pH 7.5. For one unit (U) 1 μ mol/min tyrosine is released, and for the unit "PU", the value is 1 μ g/minute (1 U = 181 PU); for the unit "PUK", it is 0.1/minute (measured is the change in

absorbance of molybdenum blue, formed by reaction with the folin 's reagent under

conditions such that 1 PUK = 50 PU).

Usage and Packaging

Prenaration Instructions Working concentration: 0.5 to 2 mg/ml Working solution: Solvent is recommended

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in distilled water. Stock solution is prepared by adding pronase powder to distilled water (10 to 20 mg/ml). Storage conditions (working solution): -15 to -25 °C

Storage and Shipping Information

Storage 2-8°C

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