

## Native *Bacillus thermoproteolyticus* Thermolysin

Cat. No. NATE-0705

Lot. No. (See product label)

### Introduction

#### Description

Thermolysin is a thermostable neutral metalloproteinase enzyme produced by the Gram-positive bacteria *Bacillus thermoproteolyticus*. It requires one zinc ion for enzyme activity and four calcium ions for structural stability. Thermolysin specifically catalyzes the hydrolysis of peptide bonds containing hydrophobic amino acids. However thermolysin is also widely used for peptide bond formation through the reverse reaction of hydrolysis. Thermolysin is the most stable member of a family of metalloproteinases produced by various *Bacillus* species. These enzymes are also termed 'neutral' proteinases or thermolysin-like proteinases (TLPs).

#### Synonyms

thermolysin; *Bacillus thermoproteolyticus* neutral proteinase; thermoase; thermoase Y10; TLN; EC 3.4.24.27

### Product Information

#### Source

*Bacillus thermoproteolyticus*

#### Form

Lyophilized

#### EC Number

EC 3.4.24.27

#### CAS No.

9073-78-3

#### Molecular Weight

36.2kDa

#### Activity

Reverse-phase HPLC analysis shows <30% of undigested insulin after 10 minutes of incubation with Thermolysin at 75°C using a 1:20 thermolysin:insulin ratio.

#### pH Stability

5.0–8.5

#### Optimum pH

8

#### Activators

Calcium and zinc act as cofactors.

### Usage and Packaging

#### Preparation Instructions

1. Resuspend Thermolysin in thermolysin digestion buffer (50mM Tris [pH 8.0], 0.5mM CaCl<sub>2</sub>). Enzyme is soluble up to 1mg/ml in thermolysin digestion buffer. Store reconstituted Thermolysin at -20°C for up to 2 weeks. 2. The optimal digestion temperature range is 65-85°C.