Creative Enzymes®

# Native Bacillus thermoproteolyticus Thermolysin

*Cat. No. NATE-0705*

*Lot. No.* (See product label)

## Introduction

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| ***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

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| ***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

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| ***Preparation Instructions*** | 1. Resuspend Thermolysin in thermolysin digestion buffer (50mM Tris [pH 8.0], 0.5mM CaCl2). 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. |