

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 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.