Creative Enzymes®

# Native Bacillus licheniformis Protease

*Cat. No. NATE-0633*

*Lot. No.* (See product label)

## Introduction

***Description*** Protease catabolizes proteins by hydrolysis of peptide bonds. Proteases are inactivated by serine active-site inhibitors, such as phenylmethylsulfonyl fluoride (PMSF) and diisopropylfluorophosphate. Protease is a serine endoproteinase with a broad specificity towards native and denatured proteins, and is active under alkaline conditions. It is active in some organic solvents such as dry octane.

***Applications*** The product has been used with other enzymes for in situ proteolysis to produce crystals suitable for structure determination. It has also been used in the process of isolation of subsarcolemmal (SS) and intermyofibrillar (IMF) mitochondria that can be used for functional in vitro studies. This is a proteolytic enzyme isolated from the fermentation of Bacillus licheniformis. It is a serine endoproteinase with a broad specificity towards native and denatured proteins, and is active under alkaline conditions.

***Synonyms*** Protease; 9014-01-1; Subtilisin A; EC 3.4.21.62; Alcalase

## Product Information

***Source*** Bacillus licheniformis

***Form*** Type VIII, lyophilized powder; Type I, aqueous solution

***EC Number*** EC 3.4.21.62

***CAS No.*** 9001-92-7

***Molecular Weight*** Subtilisin is a non-glycosylated single polypeptide chain without disulfide bonds and has a molecular weight of 27 KDa.

***Activity*** Type VIII, 7-15 units/mg solid; Type I, > 2.4 U/g

***Specificity*** Subtilisin A is a member of the Serine S8 Endoproteinase family. It has broad specificity with a preference for a large uncharged residue in the P1 position. It hydrolyzes native and denatured proteins, and is active under alkaline conditions. DNase <5.0 Kunitz units/mg solid RNase <0.05 Kunitz units/mg solid

***Unit Definition*** One unit will hydrolyze casein to produce color equivalent to 1.0 μmole (181 μg) of tyrosine per min at pH 7.5 at 37°C (color by Folin-Ciocalteu reagent).