

## Native *Bacillus licheniformis* Proteinase

Cat. No. NATE-0639

Lot. No. (See product label)

### Introduction

**Description** Proteinase catabolizes proteins by hydrolysis of peptide bonds. Proteases are inactivated by serine active-site inhibitors, such as phenylmethylsulfonyl fluoride (PMSF) and diisopropylfluorophosphate.

**Applications** The enzyme from Creative Enzymes has been used to optimize release of all mitochondrial populations from homogenized ventricular tissue of rat heart. It has also been used in the pre-hybridisation treatment of formalin fixed, paraffin wax-embedded liver specimens for detecting human and viral DNA. 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. This product also known as Subtilisin Carlsberg, has been used to hydrolyze cardiac cells to study the silencing of cardiac mitochondrial NHE1.

**Synonyms** protease; peptidase; proteinase; EC 3.4.21.62; 9014-01-1; Alkaline Protease; Protease from *Bacillus licheniformis*; Proteinase from *Bacillus licheniformis*; Subtilo peptidase A

### Product Information

**Source** *Bacillus licheniformis*

**Form** lyophilized powder

**EC Number** EC 3.4.21.62

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

**Molecular Weight** 27 KDa

**Purity** crystallization

**Activity** 7.0-14.0 units/mg solid

**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.

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

### Storage and Shipping Information

**Storage** -20°C