

## Keratinase, Recombinant

Cat. No. NATE-0853

Lot. No. (See product label)

### Introduction

#### Description

Keratinase is a particular class of extracellular proteolytic inducible enzyme with the capability of degrading insoluble keratin substrates. It is important for hydrolyzing hair, feather, and collagen in sewage system during waste water treatment. It is also useful in food industry, animal feed preparation etc. Insoluble feather keratin from poultry industry may be converted by enzymatic hydrolysis to glues, feedstuffs, fertilizers, films or used for the production of rare amino acids serine, cysteine and proline.

#### Applications

Keratinase was used for enzymatic treatment of elementary body (EB), GAG molecules, and cells in the study of the role glycosaminoglycans (GAGs) in the invasion of host cells by Chlamydia pneumoniae strains.

#### Synonyms

Keratinase; KerA; Keratinase from Bacillus licheniformis; Keratinolytic protease; EC 3.4.21

### Product Information

#### Source

E. coli BL21

#### Form

Lyophilized powder

#### EC Number

EC 3.4.21

#### Molecular Weight

~39 kDa

#### Activity

300 - 1000 units/mg

#### Isoelectric point

8.73

#### pH Stability

5.5 - 12.5

#### Optimum pH

12.5

#### Optimum temperature

37° - 70°C

#### Activators

0.10% SDS, 1.0% CTAB, and EDTA

#### Inhibitors

Tween 20, DMSO, isopropanol, methanol, and ethanol

#### Unit Definition

One unit of enzyme is able to hydrolyze casein resulting in an absorbance value as the Folin-Ciocalteu reagent equivalent to 1 umole (181µg) of tyrosine per minute at pH 7.5 at 37 °C.

### Usage and Packaging

#### Preparation Instructions

The enzyme can be solubilized at 0.5-1.0 mg/ml in either sterile water or phosphate buffer. The best activity is seen with freshly prepared solutions. However, single-use aliquots of Keratinase solutions can be stored at -20° C.

### Storage and Shipping Information

#### Storage

Store at -20°C

