

## 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

