Creative Enzymes®

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-Ciocalteau 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