

## Native Collagenase + protease inhibitor

Cat. No. NATE-0147

Lot. No. (See product label)

### Introduction

#### Description

Effective release of cells from tissue requires the action of both collagenase enzymes and the neutral protease. Collagenase is activated by four grams of calcium ( $\text{Ca}^{2+}$ ) per mole of the enzyme. The culture filtrate is thought to contain at least 7 different proteases ranging in molecular weight from 68-130 kDa. The pH optimum is 6.3-8.8. The enzyme is typically used to digest the connective components in tissue samples to liberate individual cells. Collagenase treatment can cause some cells to die. Typically, concentrations varying from 0.1 to 5 mg/mL are used for digestion. The duration of reaction can vary from 15 minutes to several hours for satisfactory cell dissociation without causing too much cell death.  $\text{Zn}^{2+}$  is required for activity. This product is used if the collagenase does not require a significant protease activity.

#### Applications

Collagenase with protease inhibitor has been used in a study to assess the association of immune system gene polymorphisms with quantitative features. It has also been used in a study to investigate the quantitative structure-activity relationship study on *Clostridium histolyticum* collagenase inhibitors. The enzyme from Creative Enzymes has been used in the isolation of porcine pancreatic islets. It has also been used in the isolation of pancreatic-infiltrating lymphocytes from mice.

#### Synonyms

EC 3.4.24.3; *Clostridium histolyticum* collagenase; clostridiopeptidase A; collagenase A; collagenase I; *Achromobacter iophagus* collagenase; collagenase; aspergillopeptidase C; nucleolysin; azocollase; metallocollagenase; soycollagestin; *Clostridium histolyticum* proteinase A; clostridiopeptidase II; MMP-8; clostridiopeptidase I; collagen peptidase; collagen protease; collagenase MMP-1; metalloproteinase-1; kollaza; matrix metalloproteinase-1; MMP-1; matrix metalloproteinase-8; matrix metalloproteinase-18; interstitial collagenase

### Product Information

#### EC Number

EC 3.4.24.3

#### Activity

2-5 FALGPA units/mg solid, > 1,000 CDunits/mg solid, Suitable for isolation of rat pancreatic islet cells.

### Storage and Shipping Information

#### Storage

-20°C