# Native Human Elastase

*Cat. No. NATE-0213*

*Lot. No.* (See product label)

## Introduction

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| ***Description*** | Neutrophil elastase is a serine proteinase in the same family as chymotrypsin and has broad substrate specificity. Secreted by neutrophils and macrophages during inflammation, it destroys bacteria and host tissue. It also localizes to Neutrophil extracellular traps (NETs), via its high affinity for DNA, an unusual property for serine proteases. |
| ***Applications*** | Elastase from Creative Enzymes has been used to digest fibronectin. The results were compared with fibronectin digestion by crude human leuk ocyte homogenateto examine the presence of fibronectin peptides in saliva of patients with Sjögren′s syndrome. It has also been used as a reference to determine the elastase activity in cell lysates. This study examined the effect of all-trans retinoic acid on pr ocoagulant and fibrinolytic activities of cultured blast cells. These blast cells were from patients with acute promyel ocytic leukemia. Elastase from human leuk ocytes has been used in a study that determined that fragments of Nle3-angiotensin (1-7) accelerate healing in dermal models. |
| ***Synonyms*** | ELANE; elastase; EC 3.4.21.37; leukocyte elastase; ELA2; elastase 2; neutrophil elaszym; serine elastase; lysosomal elastase; neutrophil elastase; polymorphonuclear leukocyte elastase; elaszym; granulocyte elastase |

## Product Information

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| ***Species*** | Human |
| ***Source*** | Human leuk ocytes |
| ***Form*** | Lyophilized from 0.05 M sodium acetate (pH 5.5) and 0.6 M NaCl |
| ***EC Number*** | EC 3.4.21.37 |
| ***CAS No.*** | 9004-06-2 |
| ***Molecular Weight*** | 29 kDa |
| ***Activity*** | > 50 units/mg protein (Bradford) |
| ***Isoelectric point*** | 8.77-9.55 |
| ***Pathway*** | Activation of Matrix Metalloproteinases, organism-specific biosystem; C-MYB transcription factor network, organism-specific biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Extracellular matrix organization, organism-specific biosystem; Systemic lupus erythematosus, organism-specific biosystem; Systemic lupus erythematosus, conserved biosystem; Transcriptional misregulation in cancer, organism-specific biosystem |
| ***Function*** | bacterial cell surface binding; cytokine binding; endopeptidase activity; heparin binding; peptidase activity; protease binding; protein binding; serine-type endopeptidase activity |
| ***Unit Definition*** | One unit will release one nanomole of p-nitrophenol per sec from Bec-L-alanine p-nitrophenyl ester at pH 6.5 at 37°C. |

## *Storage and Shipping Information*

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| ***Storage*** | −20°C |