Creative Enzymes®

# Native Human Cathepsin G

*Cat. No. NATE-0173*

*Lot. No.* (See product label)

## Introduction

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| ***Description*** | Cathepsin G is an enzymatic protein belonging to the peptidase or protease families. In humans, it is coded by the CTSG gene. The protein encoded by this gene, a member of the peptidase S1 protein family, is found in azurophil granules of neutrophilic polymorphonuclear leukocytes. The encoded protease has a specificity similar to that of chymotrypsin C, but it is most closely related to other immune serine proteases, such as neutrophil elastase and the granzymes. Cathepsin G may participate in the killing and digestion of engulfed pathogens, and in connective tissue remodeling at sites of inflammation. It also localizes to Neutrophil extracellular traps (NETs), via its high affinity for DNA, an unusual property for serine proteases. Transcript variants utilizing alternative polyadenylation signals exist for this gene. |
| ***Synonyms*** | CTSG; cathepsin G; CG; CATG; EC 3.4.21.20; chymotrypsin-like proteinase; neutral proteinase |

## Product Information

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| ***Species*** | Human |
| ***Source*** | Human Neutrophils |
| ***Appearance*** | Clear, colorless solution |
| ***Form*** | Liquid |
| ***EC Number*** | EC 3.4.21.20 |
| ***CAS No.*** | 56645-49-9 |
| ***Purity*** | > 96% (SDS-PAGE) |
| ***Activity*** | > 5 U/mL |
| ***Specificity*** | > 5 U/mg protein |
| ***Pathway*** | ACE Inhibitor Pathway, organism-specific biosystem; Activation of Matrix Metalloproteinases, organism-specific biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Degradation of the extracellular matrix, organism-specific biosystem; Diabetes pathways, organism-specific biosystem; Disease, organism-specific biosystem |
| ***Function*** | heparin binding; peptidase activity; serine-type endopeptidase activity |
| ***Unit Definition*** | One unit will hydrolyze one micromole of succinyl-alanine-alanine-proline-phenylalanine-p-nitroanilide per minute at 37°C and pH 7.5. |

## Storage and Shipping Information

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| ***Storage*** | 2-8°C |