Creative Enzymes®

Native Bovine Cathepsin C

Cat. No. NATE-0170

Lot. No. (See product label)

Introduction

Description	Cathespin C is a dipeptidyl aminopeptidase that can sequentially remove dipeptides from a peptide chain with an unsubstituted N-terminus. The enzyme exhibits a preference for glycine and proline as N-terminal aminoacids. Substrates that have an N-terminal lysyl or arginyl residue, or a penultimate proryl residue are not targeted by this enzyme. The endopeptidase activity requires the presence of halide ions and sulfydryl activators.
Applications	Cathepsin C has been used in a study that demonstrated the potential of a proteomics approach to identify novel proteins expressed by extravillous trophoblast and to uncover the mechanisms leading to disease states in pregnancy. Cathepsin C has also been used in a study to evaluate biodegradable thermogels. The enzyme from Creative Enzymes has been used in the activation of granzyme k (Gzmk) precursor from E. coli. Granzymes are granule-stored lymphocyte serine proteases that are implicated in T-and natural killer cell-mediated cytotoxic defense reactions.
Synonyms	CTSC; cathepsin C; 9032-68-2; EC 3.4.14.1; dipeptidyl aminopeptidase I; dipeptidyl transferase; dipeptidyl transferase; dipeptide arylamidase I; DAP I; dipeptidyl-peptidase I; DPP-I; CPPI; DPP1; DPPI; HMS; JP; JPD; PALS; PDON1; PLS

Product Information

Species	Bovine
Source	Bovine spleen
Form	Lyophilized from a 1 M sodium chloride solution.
EC Number	EC 3.4.14.1
CAS No.	9032-68-2
Activity	> 5 units/mg protein
Composition	Protein, > 25% biuret
Pathway	Lysosome, organism-specific biosystem; Lysosome, conserved biosystem
Function	cysteine-type peptidase activity
Unit Definition	One unit will produce 1 μmole of Gly-Phe-NHOH from Gly-Phe-NH2 and hydroxylamine per min at pH 6.8 at 37°C using DL-phenylalanine hydroxamic acid as the standard. In addition to its hydrolytic properties, cathepsin C catalyzes the polymerization of dipeptide amides.