Creative Enzymes®

Native Bovine α-Chymotrypsin

Cat. No. NATE-0746

Lot. No. (See product label)

Introduction

Description	Chymotrypsin is a digestive enzyme component of pancreatic juice acting in the duodenum where it performs proteolysis, the breakdown of proteins and polypeptides. Chymotrypsin preferentially cleaves peptide amide bonds where the carboxyl side of the amide bond (the P1 position) is a large hydrophobic amino acid (tyrosine, tryptophan, and phenylalanine). These amino acids contain an aromatic ring in their sidechain that fits into a 'hydrophobic pocket' (the S1 position) of the enzyme. It is activated in the presence of trypsin.
Applications	Chymotrypsin (EC 3.4.21.1, chymotrypsins A and B, alpha-chymar ophth, avazyme, chymar, chymotest, enzeon, quimar, quimotrase, alpha-chymar, alpha-chymotrypsin A, alpha-chymotrypsin) is a digestive enzyme component of pancreatic juice acting in the duodenum where it performs proteolysis, the breakdown of proteins and polypeptides. Chymotrypsin preferentially cleaves peptide amide bonds where the carboxyl side of the amide bond (the P1 position) is a large hydrophobic amino acid (tyrosine, tryptophan, and phenylalanine). These amino acids contain an aromatic ring in their sidechain that fits into a 'hydrophobic pocket' (the S1 position) of the enzyme. It is activated in the presence of trypsin. The hydrophobic and shape complementarity between the peptide substrate P1 sidechain and the enzyme S1 binding cavity accounts for the substrate specificity of this enzyme. Chymotrypsin also hydrolyzes other amide bonds in peptides at slower rates, particularly those containing leucine and methionine at the P1 position. Structurally, it is the archetypal structure for its superfamily, the PA clan of proteases.
Synonyms	EC 3.4.21.1; α-Chymotrypsin; chymotrypsins A and B; alpha-chymar ophth; avazyme; chymar; chymotest; enzeon; quimar; quimotrase; alpha-chymar; alpha-chymotrypsin A; alpha-chymotrypsin; Chymotrypsin

Product Information

Species	Bovine
Source	Bovine Pancreas
Form	lyophilized powder
EC Number	EC 3.4.21.1
CAS No.	9004-07-3
Activity	> 40 units/mg protein
Function	serine-type endopeptidase activity

Storage and Shipping Information

Storage	−20°C