Carboxypeptidase A
from bovine pancreas

Product Number  C 0386
Storage Temperature  cooler

Product Description
Enzyme Commission (EC) Number: 3.4.17.1
CAS Number: 11075-17-5
Molecular Weight: 34.3 kDa
pI: 6.0
Extinction Coefficient: E1% = 18.8 (278 nm, 10% NaCl)
Synonyms: carboxypolypeptidase, peptidyl-L-amino acid hydrolase

This product is supplied as a crystalline suspension in deionized water. The addition of toluene at 5 ml per gallon prevents microbial growth.

Carboxypeptidase A is a protease which will hydrolyze C terminal amino acids, primarily aromatic and aliphatic, from proteins. It has little or no action upon Asp, Glu, Arg, Lys, or Pro residues. It is a metalloenzyme containing 1 mole of zinc per mole of enzyme and consists of a single chain polypeptide. In addition to being able to hydrolyze peptide bonds, carboxypeptidase A also possesses esterase activity.

The following substrates may be utilized with carboxypeptidase A: hippuryl-DL-B-phenyllactate (Km = 0.088 mM, Product No. H 9755), hippuryl-L-phenylalanine (Km = 1.91 mM, Product No. H 6875), furylacryloylphenyllactate (Km = 0.132 mM), and carbobenzoxyglycyl-L-phenylalanine (Km = 5.83 mM). The pH optimum with hippuryl-L-phenylalanine is 7.5.

Inhibitors of carboxypeptidase A include: phenylacetate, 2-phenylethionate, 3-phenylbutyrate, D-phenylalanine, D-histidine, hydrocinnamate, p-nitrophenylacetate, indoleacetate, 2-indoleproprionate, 3-indoleproprionate, 2-cyclohexylproprionate, and 1,10-phenanthroline.

Carboxypeptidase A can be utilized in conjunction with carboxypeptidase B for C-terminal protein sequencing since carboxypeptidase B readily cleaves at arginine and lysine, and the two enzymes have a similar pH optimum.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in 1 M NaCl (1 mg/ml), yielding a clear, colorless solution.

References
