Product Information

α-Amylase from porcine pancreas
PMSF treated, Type I-A

Catalog Number A4268
Storage Temperature 2–8 °C

CAS RN 9000-90-2
EC 3.2.1.1
Synonym: β-N-acetylgalcosaminidase

Product Description

α-Amylase isolated from porcine pancreas is a glycoprotein.1 It is a single polypeptide chain of 475 residues, containing 2 SH groups and four disulfide bridges and a tightly bound Ca2+ necessary for activity.2,3 Chloride ions are necessary for activity and stability.4 The pH range for activity is 5.5 to 8.0, with the pH optimum at 7.5.

Molecular mass:6 51–54 kDa

α-Amylase from porcine pancreas exists as two equally active forms, I and II, comparable in molecular mass and amino acid composition, but with distinct isoelectric point values:7

- form I: pI of 5.95
- form II: pI of 5.25

The crystal structure of form I of α-amylase from porcine pancreas has been reported.7

α-Amylase hydrolyzes the α(1→4) glucan linkages in polysaccharides of three or more α(1→4) linked D-glucose units. The α(1→6) bond is not hydrolyzed. The natural substrates starch or glycogen can be replaced by low molecular mass compounds, to a limited extent.8

This product has been treated with phenylmethane-sulfonyl fluoride (PMSF), and is offered as a suspension in 2.9 M NaCl containing 3 mM CaCl2.

Unit Definition: One unit will liberate 1.0 mg of maltose from starch in 3 minutes at pH 6.9 at 20 °C.

Storage/Stability

Store the product at 2–8 °C. In general, solutions of α-amylase in 25 mM Trizma® HCl, pH 7.5, with 100 mM KCl are stable at 0 °C or −20 °C for at least 9 days. Solutions in 1 mM phosphate, pH 7.3, with 30 mM CaCl2 may be stored at −15 °C.9

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

References


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MES,RXR,GCY,MAM 06/18-1