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ProductInformation

Protease
from *Streptomyces griseus*

Catalog Number **P6911**
Storage Temperature –20 °C

CAS RN 9036-06-0
Synonyms: Actinase E; Pronase E

Product Description

Protease from *Streptomyces griseus* is a mixture of at least three proteolytic activities including an extracellular serine protease. In general, serine proteases display a wide range of substrate specificities, which are believed to be mediated by an active site composed of one Asp, one His, and a Ser residue in the molecule. This enzyme prefers to hydrolyze peptide bonds on the carboxyl side of glutamic or aspartic acid.

Molecular mass: ~20 kDa (monomer)

Protease activity can be completely inactivated by heating above 80 °C for 15–20 minutes.

This product is collected from the culture broth of *S. griseus* and purified by successive column procedures. It is highly stable in the pH range of 5.0–9.0, with peak activity at pH 8.8. This protease preparation is a molecular biology reagent with no DNase, RNase, or nickase activity detected. Protease is typically used in nucleic acid isolation procedures in incubations of 0.5–3.0 hours supplemented with 0.2% sodium dodecyl sulfate and 10 mM EDTA. It is compatible with many DNA and RNA isolation buffers and has broad substrate specificity.

Activity: ≥4 units/mg solid

Unit definition: One unit will hydrolyze casein to produce color equivalent to 1.0 micromole (181 µg) of tyrosine per minute at pH 7.5 at 37 °C.

The protease is incubated for 10 minutes at pH 7.5 at 37 °C in a 6 ml reaction volume containing 0.54% casein and 0.041 M potassium phosphate buffer. The reaction is stopped by the addition of 5.0 ml of 0.11 M trichloroacetic acid. Liberated tyrosine equivalents were determined using Folin-Ciocalteau reagent.

Precautions and Disclaimer

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

Preparation Instructions

The product is soluble in water (5-20 mg/ml).

Storage/Stability

Store the product at –20 °C.

References

1. Maniatis, T., *et al*., Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Laboratory (1982).

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