Product Information

Thermolysin from *Geobacillus stearothermophilus*

T7902

Storage Temperature −0 °C

Synonyms: Protease from *Bacillus thermoproteolyticus,* Thermophilic-bacterial protease

Product Description

Thermolysin is a thermostable extracellular metalloendopeptidase that binds one zinc ion and four calcium ions as cofactors. It has a low substrate specificity and thus produces a number of short fragments suitable for sequencing. Thermolysin is used to do limited proteolysis for peptide mapping and studies of protein structure and conformational changes.[2,3,4,5,6]

This product is cell culture tested and is suitable for use in cell culture experiments.

Thermolysin hydrolyzes protein bonds on the N-terminal side of hydrophobic amino acid residues, with preferential cleavage as follows:

X-(cleavage site)-Y-Z

X = any amino acid

Y = Leu, Phe, Ile, Val, Met, Ala

Z = any amino acid other than Pro

Cleavage N-terminal to Leu is preferred over cleavage N-terminal to Phe, which in turn is preferred over cleavage N-terminal to the other amino acids. The optimum pH of the reaction is 8.0 and the optimal temperature for activity is 70 °C. Thermolysin has considerable stability over the pH range 5-9.5.

The crystal structure of thermolysin to 1.6 Å resolution has been reported.[7] The isolation, cloning, and expression in *Bacillus subtilis* of the gene coding for thermolysin from *Bacillus thermoproteolyticus* has been published.[8]

Molecular Weight

34.6 kDa (calculated)[1]

CAS Number

9073-78-3

Enzyme Commission (EC) Number:

3.4.24.27

λmax

280 nm

Extinction coefficient

$E^{1\%}$ = 17.65

pI

4.45

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in acetate buffer, pH 7.5 (0.2 mg/mL), yielding a clear to very slightly hazy, colorless solution.

References

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