PRODUCT INFO

TEV protease (TEVp)
Cat. No. E-9005

Description

The protease is a recombinant version of the catalytic domain of the nuclear inclusion protein of the *Tobacco Etch Virus*. The enzyme contains a histidine tag at the N-terminus and has a molecular weight of 28.5 kDa. The TEV protease recognition sequence with the highest catalytic e ciency is Glu-Asn-Leu-Tyr-Phe-Glu-X (E-N-L-Y-F-Q-X). The amino acid in the X position can be S, G, A, M, C, or H. The cleavage occurs between Glutamic and X amino acid residues (Gln-X). The protease has increased solubility and reduced autolysis due to the presence of several mutations.
TEV protease remains active in the range of pH 6-9 and temperature 4-37°C.
TEV protease is inactivated by heating at 65°C for 10-15 minutes.

Application

The TEV protease can be used to cleave recombinant fusion polypeptides having a protease recognition site between the leader fragment and the target protein. The presence of a histidine label on the TEV protease makes it possible to purify the target protein from the enzyme using IMAC.

Source

The enzyme was isolated from *E. coli* cells containing a plasmid with a cloned fragment of the gene *Tobacco Etch Virus*.

Unit Definition

1 unit of TEV protease will cleave 2 µg of MBP-fusion protein, MBP-Bst (Mr ~145 kDa), to 90% completion in a total reaction volume of 10 µl in 1 hour at 30°C in 50 mM Tris-HCl (pH 7.5 @ 25°C) with 0.5 mM EDTA and 1 mM DTT (1 ml 10x bu er supplied with enzyme). Separation of reaction products are visualized by SDS-PAGE.

Enzyme concentration: 5 000 u/ml.

Cat. No	Product name	Quantity	Volume
E-9005	TEV protease	5000 u	1000 µl

Storage Bu er

50 mM Tris-HCl, (pH 7.5 @ 25°C), 250 mM NaCl, 1 mM EDTA, 1 mM TCEP, 50% glycerol.

Quality control

Each batch of enzyme is tested for enzyme activity, SDS-PAGE electrophoretic purity, and the absence of nonspecific proteolytic activity.

Reaction Conditions

Reaction bu er: 50 mM Tris-HCl (pH 7.5 @ 25°C), 0.5 mM EDTA and 1 mM DTT. The optimum reaction temperature is 30°C. The reaction time and the ratio of substrate and enzyme are selected empirically, depending on the nature of the substrate. It is allowed to carry out reactions at 4°C for a long time (16-24 hours).

Storage and transportation conditions

Stored at –20°C. Transportation is allowed at a temperature not higher than +8°C during two days.

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