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Recombinant Tobacco Etch Virus Protease, His Tag

Catalog No.	CSI20139A	**Quantity:**	300 IU
	CSI20139B		1,000 IU
	CSI20139C		10,000 IU

Alternate Names: P1 protease, TEV protease

Description: TEV protease encoded by the tobacco etch virus is a catalytic domain of the Nuclear Inclusion a (NIa) protein. It is consists of 241 a.a. amino acids with the molecular weight of 27kDa. TEV recognizes the amino acid sequence of the general form E-X-X-Y-X-Q (or S)/X', and cleaves between Q (or S)/X'. In this form X and X' stand for any of the amino acid residues, except that X' cannot be P. The optimal cleavage site is ENLYFQ/G. As having the absolute specificity and wildly using conditions like broad pH range and ionic strength, the TEV protease became more versatile than EK, thrombin and other protease used in biochemical applications, especially recombinant protein production. The optimal temperature for cleavage is 30°C; however, the enzyme can be used at temperatures as low as 4°C. Following digestion, TEV Protease can be removed from the reaction via the His tag sequence by Ni2+-chelate affinity chromatography.

UniProt ID: Q0GDU8

Source: *E. coli*

Concentration: ~10 IU/µl, lot specific

Molecular Weight: 27 kDa (241 aa)

Formulation: Sterile-filtered 25 mM Tris-HCl, pH 8.0, 75 mM NaCl, 5 mM EDTA, 10 mM GSH, containing 50 % Glycerol

Purity: > 90 % by SDS-PAGE analysis

Biological Activity: One unit is defined as the amount of enzyme needed to cleave 3 µg of fusion protein in 1 hour to 85 % completion at 30°C in a buffer containing 50 mM Tris-HCl, pH 8.0, 0.5 mM EDTA, and 1 mM DTT.

Storage & Stability: Store as supplied at -20°C to -80°C for up to 6 months. Once opened under sterile conditions, store at -20°C to -80°C for up to 3 months.
Avoid repeated freeze-thaw cycles.

Application Notes: A number of variables can be changed to optimize the cleavage of any specific protein. The amount of rTEV, the temperature of the incubation, and the time needed for cleavage may be examined. If the protein of interest is heat-labile, then 4 °C incubations are recommended. Reactions at 4 °C will require longer incubation times and/or more rTEV.

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