Recombinant Tobacco Etch Virus Protease, His-Tagged (rTEV, His)

PrimeGene Technical Data Sheet

Catalog Number:	461-02
Source:	*Escherichia coli.*
Quantity:	300IU/1000IU/10000IU
Unit Definition:	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.
Purity:	> 90 % by SDS-PAGE analysis.
Physical Appearance:	Clear colorless liquid.
Formulation:	A 0.2 μm filtered solution in 25 mM Tris-HCl, pH 8.0, 75 mM NaCl, 5 mM EDTA, 10 mM GSH, with 50 % Glycerol.
Recommended Conditions for Cleavage of a Fusion Protein:	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 longerincubation times and/or more rTEV.
Stability & Storage:	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 6 months from date of receipt, -20 to -70 °C as supplied. ● 3 months, -20 to -70 °C under sterile conditions after opening.
Usage:	This material is offered by Shanghai PrimeGene Bio-Techk for research, laboratory or further evaluation purposes. **NOT FOR HUMAN USE**.

Tobacco Etch Virus Protease

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. with the molecular weight of 27 k Da. 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.

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