Recombinant Tobacco Etch Virus Protease, His-Tagged

#R00507

Size: 300 IU

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.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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.

Product Specification

Synonyms	P1 Protease
Source	Escherichia coli.
Tags	His
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.
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.
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.