

Recombinant Tobacco etch virus TEV Protease (RPT0011LQ)

Product Description

Recombinant TEV protease is expressed by *E. coli* system with a N-terminal His tag, and purified by Ni-NTA affinity chromatography. The TEV protease recognizes and hydrolyzes the sequence EXXYXQ ↓ (G/S). The sequence with the highest catalytic efficiency is ENLYFQ ↓ S. It is recommended to add the sequence at N-terminal of target proteins, so that there is only one serine or glycine residue left after proteolysis. TEV protease can be removed by Ni-NTA affinity chromatography.

Recombinant TEV protease has good activity between 29–34 °C. When temperature reaches 37 °C or above, it loses proteolytic activity dramatically. It is recommended to keep TEV protease with protein substrates overnight at 4 °C to retain the bio-activity of target proteins.

Recombinant TEV protease is active in a wide range of buffers. The optimal pH range is between pH6.0 and pH9.0. When pH is below 5.0, TEV protease loses proteolytic activity.

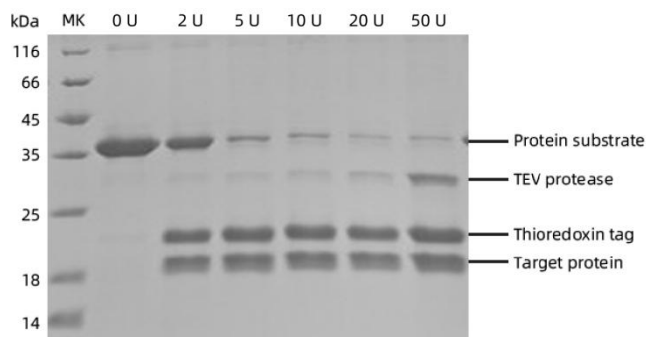
Recombinant TEV protease retains good activity when there is PMSF or AEBSF(1 mM), TLCK(1 mM), Bestatin(1 mg/mL), EDTA(1 mM) and imidazole(400 mM) in reaction systems.

Product Specification

Source	<i>E. coli</i>
Tag	N-6*His
Purification	Ni-NTA affinity chromatography
Purity	≥95% by SDS-PAGE
Specific Activity	5 U/μL
Unit Definition	1 unit of TEV Protease will cleave 3 μg of substrate protein to 85% completion in 1×TEV Buffer (50 mM Tris, pH 8.0, 0.1 mM EDTA, 1 mM DTT) at 30°C in 1 hour.
Storage	≤ -20 °C

Bio-activity verification

30 μg protein substrate were kept with different units of recombinant TEV Protease in 50 mM Tris, pH 8.0, 0.1 mM EDTA, 1 mM DTT at 30°C for 1 hour. The volume of each reaction system was 200 μL. After reaction, 20 μL of each reaction was checked by SDS-PAGE.



Catalytic efficiency under different temperatures

Time	4°C	16°C	22°C	30°C
1h	32%	73%	79%	85%
2h	51%	89%	90%	95%
3h	64%	99%	99%	99%
3.5h	70%	99%	99%	99%

Recomended reaction system

Total Volume	50 µL
Substrate	30-50 µg
TEV Protease (10X) Buffer	5 µL
TEV Protease	1 µL
Add distilled water to 50 µL, keep 1 hour at 30°C or overnight at 4°C	

Attention

When the concentration of Zn^{2+} is >5 mM, the activity of TEV Protease will be inhibited. The reagents react with Cystein are also potential inhibitors of recombinant TEV Protease. For safety and health concerns, please wear a lab coat and gloves when handling experiments. This product is for research use only.