

## HRV 3C Protease

Cat no. LDG0009RG

### Product Overview

#### Package component

Specification	Item	Amount
1,000 U	HRV 3C Protease	1 vial (Lyophilized)
	10X HRV 3C Cleavage Buffer	10 mL
10,000 U	HRV 3C Protease	1 vial (Lyophilized)
	10X HRV 3C Cleavage Buffer	10 mL

### Description

HRV 3C Protease is a recombinant form of the 3C protease derived from human rhinovirus 14 expressed in *E. coli* (specific activity 1800-2000 U/mg). This product is a highly purified recombinant 6XHis-fusion protein. This protease requires neither metal nor cofactors for activity. HRV 3C Protease recognizes the cleavage site: Leu-Glu-Val-Leu-Phe-Gln ↓ Gly-Pro (LEVLFQ ↓ GP).

### Source

*Escherichia coli*

### Activity

One unit of HRV 3C Protease is defined as the amount of enzyme that will cleave >95% of 0.1 mg HRV 3C cleavage control protein in 150 mM NaCl, 50 mM Tris-HCl pH 7.5, at 4°C for 16 h.

### Formulation

- HRV 3C Protease: lyophilized from a solution containing 50 mM Tris, 150 mM NaCl, 1 mM EDTA, 1 mM DTT, 0.04% Tween20, 8% trehalose, 8% mannitol.
- 10X HRV 3C Cleavage Buffer: 1.5 M NaCl, 0.5 M Tris-

HCl, pH 7.5

### Storage and Stability

- Lyophilized protein should be stored at -20°C. Upon reconstitution, protein aliquots should be stored at -20°C.
- HRV 3C Protease Cleavage Buffer should be stored at -20°C or 4°C.

### Procedure

It is recommended to reconstitute the lyophilized protein in sterile H<sub>2</sub>O and incubate the stock solution for at least 20 min to ensure sufficient re-dissolved.

Cleavage procedure:

Component	Amount
HRV 3C Protease	X μL
100 μg protein	Y μL
10X HRV 3C Cleavage Buffer	10 μL
H <sub>2</sub> O	90 - X - Y μL
Total volume	100 μL

- HRV 3C protease: target protein ratio of 1:25~1:100 (U/μg) is used for most fusion protein cleavage.
- Incubate the reaction mixture at 4°C for 16 hours or overnight.
- Determine cleavage level of the samples by SDS-PAGE analysis.

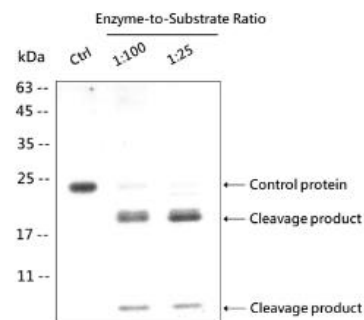


Fig. The control protein was cleaved by HRV 3C protease at 4°C for 16h.

### Important notes

1. If shorter incubation time is required, more amount of HRV 3C protease or higher temperature (RT) can be implemented. Reaction can be performed at 4°C-37°C. 4°C is recommended as the starting standard.
2. Cleavage efficiency may differ based on structure and properties of each target protein, we recommend testing several enzyme-to-substrate ratios, temperatures and incubation times.
3. HRV 3C Protease reactions can be performed in a buffer which is optimal for the target protein. Reducing reagents (e.g., DTT) or salts (e.g., NaCl) can be added for cleavage efficiency evaluation.

### Disclaimer

This product is for research use only and is not intended for diagnostic use.

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