

UniHRV 3C Protease

Cat no. LDG0010RG

Product Overview

Package component

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

Description

UniHRV 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 and requires neither metal nor cofactors for activity. UniHRV 3C Protease recognizes the cleavage site: Leu-Glu-Val-Leu-Phe-Gln ↓ Gly-Pro (LEVLFQ ↓ GP). UniHRV 3C Protease demonstrate excellent cleavage efficiency in a variety of fusion proteins.

Source

Escherichia coli

Activity

One unit of UniHRV 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

- UniHRV 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 H₂O and incubate the stock solution for at least 20 min to ensure sufficient re-dissolved.

Cleavage procedure:

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

- UniHRV 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.

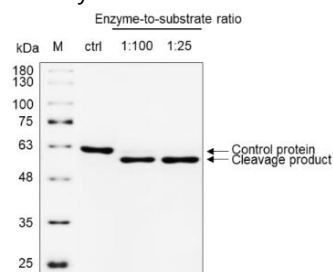


Fig. The control protein was cleaved by UniHRV 3C protease at 4°C for 16h.

Important notes

- If shorter incubation time is required, more amount of UniHRV 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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