

SUMO Protease (ULP1) (Active)

Cat no. LDG0014RG

Product Overview

Package component

Item	Content
SUMO Protease (ULP1) (Active)	Bulk
SUMO Protease (ULP1) (Active)	2,500 U

Description

SUMO Protease (ULP1, Ubiquitin-like-specific protease 1) is a highly active cysteine protease derived from *Saccharomyces cerevisiae*. It has often been used as a biotechnological tool for cleavage affinity purification tags such as ubiquitin-like (UBL) protein, and SUMO from fusion proteins. ULP1 protease specifically recognizes the tertiary structure of SUMO rather than an amino acid sequence. ULP1 protease has a His-tag for easy removal from a cleavage reaction by using nickel affinity resins. Notably, the cleavage reactions are available in a buffer containing 2 M urea.

Source

Escherichia coli

Activity

One unit of SUMO Protease (ULP1) cleaves > 85% of 2 µg control substrate at 30°C for 1 h.

Formulation

- The protein was lyophilized from a solution containing 50 mM Tris-HCl, 100 mM NaCl, 5 mM DTT, pH 8.010X HRV 3C Cleavage Buffer: 1.5 M NaCl, 0.5 M Tris-HCl, pH 7.5
- 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.

Storage and Stability

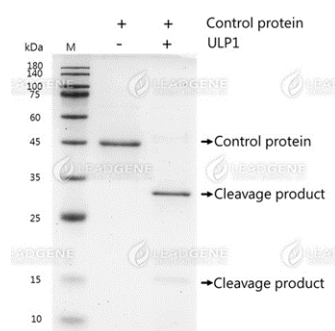
- Lyophilized protein should be stored at -20°C. Upon reconstitution, protein aliquots should be stored at -20°C or -80°C.

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:

- To optimize cleavage conditions, it is recommended to run preliminary cleavage reactions at a small scale.
- Dilute the target protein sample to 1-2 mg/mL with PBS solution.
- An effective general of the SUMO Protease (ULP1) protease: target protein ratio is 1U:2 µg.
- Reaction can be performed at 4°C-30°C. 4°C is recommended as the starting standard. Incubate the reaction mixture at 4°C for 16 hours or overnight.
- Determine cleavage level of the samples by SDS-PAGE analysis.



- Once optimize for the cleavage condition, the cleavage reactions can be scaled up to cleave a large amount of the target fusion protein.

Important notes

- SUMO Protease (ULP1) protease: target protein ratio of 1U:2 µg is used for most fusion protein cleavage. 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.

2. SUMO Protease (ULP1) reactions can be performed in a buffer containing 2 M urea.
3. SUMO Protease (ULP1) reactions can be performed in a buffer which is optimal for the target protein. Salts (e.g., NaCl) can be added to 300 mM for cleavage efficiency evaluation.

Disclaimer

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

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