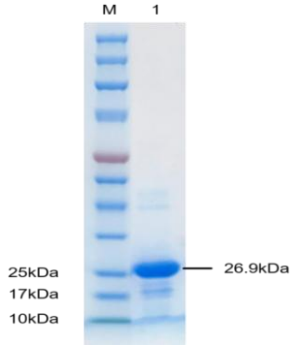
SUMO protease（Ulp1）protein, Recombinant

1. For Sale

Product Name	Catalog #	Size
SUMO protease（Ulp1）protein, Recombinant	PGEU0001P-T3	10ug
		50ug
		500ug
		1mg

2. Product Description

Other Names	NIB1; Ulp1;
Protein & NCBI Number	Q02724, NM_001183834.1
Host	E.coli
Express Region	Lys401-Lys621
Protein Sequence	KKLVPELNEKDDDQVQKALASRENTQLMNRDNIEITVRDFKTLAPRRWLNDT IIEFFMKYIEKSTPNTVAFNSFFYTNLSERGYQGVRRWMKRKKTQIDKLDKIFT PINLNQSHWALGIIDLKKKTIGYVDSLSNGPNAMSFAILTDLQKYVMEESKHTI GEDFDLIHLDCPQQPNGYDCGIYVCMNTLYGSADAPLDFDYKDAIRMRRFIA HLILTDALK
Molecular Weight	The protein consists of 230 amino acids (including the fusion tag), with a predicted molecular weight of 26.9kDa, which matches the actual molecular weight.
Fusion Tag	6×His (C-terminus)
Purity	≥85% SDS-PAGE
Physical Property	Liquid
Components	0.01M PBS+20% glycerol, sterile solution.
Storage & Stability	After aliquoting, the stability of the samples can be maintained for up to 6 months at -20°C to -80°C, avoiding repeated freeze-thaw cycles.
Applications	Antibody preparation, immunoassay (ELISA, WB), Cleaves the SUMO tag at the N terminus of the fusion protein, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products
Figure. SDS-PAGE	 Bis-Tris (MOPS) SDS-PAGE

3. Storage and Transportation

Transport at 2-8℃, product is stable for up to twelve months from date of receipt under sterile conditions at -20℃ to -80℃.

4. Notes

This product is for research use only. Please wear laboratory attire and disposable gloves when handling.

5. Background

ULP1 also known as Ubiquitin-like-specific protease 1， Smt3-protein conjugate proteinase,Ulp1 endopeptidase, it is mainly sourced Saccharomyces cerevisiae (strain ATCC 204508/S288c), it includes three domains: ULP1, Peptidase-C48 and PLN03189.

Catalytic Activity: Hydrolysis of the alpha-linked peptide bond in the sequence Gly-Gly-|-Ala-Thr-Tyr at the C-terminal end of the small ubiquitin-like modifier (SUMO) propeptide, Smt3, leading to the mature form of the protein. A second reaction involves the cleavage of an epsilon-linked peptide bond between the C-terminal glycine of the mature SUMO and the lysine epsilon-amino group of the target protein.

6. References

1) Lima CD, Rawlings ND, Woessner JF (2004). "Ulp1 endopeptidase". In Barrett AJ (ed.). Handbook of Proteolytic Enzymes (2nd ed.). London: Elsevier. pp. 1340–1344.

2) Li SJ, Hochstrasser M (March 1999). "A new protease required for cell-cycle progression in yeast". Nature. 398 (6724): 246–51.

3) Taylor DL, Ho JC, Oliver A, Watts FZ (March 2002). "Cell-cycle-dependent localisation of Ulp1, a Schizosaccharomyces pombe Pmt3 (SUMO)-specific protease". Journal of Cell Science. 115 (Pt 6): 1113–22.

4) Li SJ, Hochstrasser M (March 2003). "The Ulp1 SUMO isopeptidase: distinct domains required for viability, nuclear envelope localization, and substrate specificity". The Journal of Cell Biology. 160 (7): 1069–81.

5) Ihara M, Koyama H, Uchimura Y, Saitoh H, Kikuchi A (June 2007). "Noncovalent binding of small ubiquitin-related modifier (SUMO) protease to SUMO is necessary for enzymatic activities and cell growth". The Journal of Biological Chemistry. 282 (22): 16465–75.

6) Mukhopadhyay D, Dasso M (June 2007). "Modification in reverse: the SUMO proteases". Trends in Biochemical Sciences. 32 (6): 286–95.）

7) A new protease required for cell-cycle progression in yeast.Li S.J., Hochstrasser M.Nature 398:246-251(1999)

8) Ulp1-SUMO crystal structure and genetic analysis reveal conserved interactions and a regulatory element essential for cell growth in yeast.Mossessova E., Lima C.D.Mol. Cell 5:865-876(2000)