PRODUCT INFORMATION

Ubiquitin-like-specific Protease 1 (*S. cerevisiae*, recombinant)

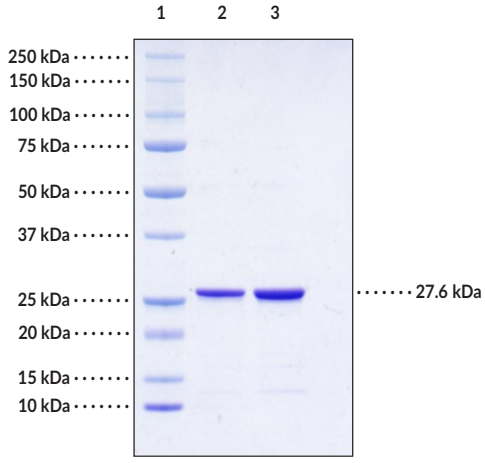
Item No. 41844

Overview and Properties

Synonyms:	His-Ulp1, SUMO Protease, Ubl-specific Protease 1, Ulp1
Source:	Active recombinant *S. cerevisiae* N-terminal His-tagged Ulp1 expressed in *E. coli*
Amino Acids:	403-621
Uniprot No.:	Q02724
Molecular Weight:	27.6 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥80% estimated by SDS-PAGE
Supplied in:	50 mM Tris, pH 7.5, with 200 mM sodium chloride, 10% glycerol, and 1 mM DTT
Protein Concentration:	***batch specific*** mg/ml
Activity:	At a 1:100 mass ratio of Ulp1 protease to SUMO-tagged MLL1 protein, a >90% cleavage efficiency was observed at room temperature within 30 minutes. Depending on the user's conditions, optimization may be required.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Ubiquitin-like-specific Protease 1 (2 µg)
Lane 3: Ubiquitin-like-specific Protease 1 (4 µg)

SDS-PAGE Analysis of Ubiquitin-like-specific Protease 1.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION

Description

Ubiquitin-like-specific protease 1 (Ulp1) is a small ubiquitin-related modifier (SUMO) protease and member of the cysteine protease superfamily.[1] It is composed of an N-terminal regulatory domain and a C-terminal protease domain.[2] Ulp1 processes Smt3, the yeast ortholog to human SUMO, into its mature form by cleavage of the alanine-threonine-tyrosine residues at the C-terminal end.[1] It also deconjugates Smt3 from Smt3-protein conjugates, which is required for normal cell cycle progression in *S. cerevisiae*, and can cleave human SUMO-tagged proteins.[1-3] A version of Ulp1 lacking the N-terminal regulatory domain does not localize to the nuclear pore complex and can desumoylate certain Ulp2 targets. Cayman's Ubiquitin-like-specific Protease 1 (*S. cerevisiae*, recombinant) protein can be used for SUMO tag cleavage from SUMO fusion proteins.

References

1. Mossessova, E. and Lima, C.D. Ulp1-SUMO crystal structure and genetic analysis reveal conserved interactions and a regulatory element essential for cell growth in yeast. *Mol. Cell* **5(5)**, 865-876 (2000).
2. Li, S.-J. and Hochstrasser, M. The Ulp1 SUMO isopeptidase: Distinct domains required for viability, nuclear envelope localization, and substrate specificity. *J. Cell. Biol.* **160(7)**, 1069-1081 (2003).
3. Li, S.-J. and Hochstrasser, M. A new protease required for cell-cycle progression in yeast. *Nature* **398(6724)**, 246-251 (1999).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM