Ubiquitin-like-specific protease 1D (ULP1D), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP05469*

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Ubiquitin-like-specific protease 1D (ULP1D) , partial

Product Gene Name
ULP1D recombinant protein

Product Synonym Gene Name
ULP1D

Purity
Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)

Format
Lyophilized or liquid (Format to be determined during the manufacturing process)

Host
E Coli or Yeast or Baculovirus or Mammalian Cell

Molecular Weight
67,191 Da

Storage
Store at -20℃. For long-term storage, store at -20℃ or -80℃. Store working aliquots at 4℃ for up to one week. Repeated freezing and thawing is not recommended.

Protein Family
Ubiquitin-like-specific protease

NCBI Accession
NP_176228.3

NCBI GI
145336892

NCBI GenBank Nucleotide
NM_104712.5

NCBI GeneID
842317

NCBI Official Full Name
UB-like protease 1D

NCBI Official Symbol
ULP1D

NCBI Official Synonym Symbols

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OTS1; OVERLY TOLERANT TO SALT 1; T13D8.11; T13D8_11; UB-like protease 1D

NCBI Protein Information

UB-like protease 1D

NCBI Summary

Encodes a deSUMOylating enzyme. In vitro it has both peptidase activity and isopeptidase activity: it can cleave C-terminal residues from SUMO to activate it for attachment to a target protein and it can also act on the isopeptide bond between SUMO and another protein. sGFP:OTS1 protein accumulates in the nucleus. Double mutant analysis with ULP1C/OTS2 indicates that these genes are involved in salt stress responses and flowering time regulation. Over-expression of 35S:OTS1 increases salt tolerance and reduces the level of SUMO-conjugated proteins. OTS1 transcript levels do not appear to change in response to salt, but, salt stress reduces the level of OTS1 protein in a proteasome-dependent manner.

UniProt Gene Name

ULP1D

UniProt Synonym Gene Names

OTS1

UniProt Protein Name

Ubiquitin-like-specific protease 1D

UniProt Synonym Protein Names

Protein OVERLY TOLERANT TO SALT 1

UniProt Primary Accession

Q2PS26

UniProt Secondary Accession

O80745

UniProt Related Accession

Q2PS26

UniProt Comments

Protease that catalyzes two essential functions in the SUMO pathway: processing of full-length SUMOs to their mature forms and deconjugation of SUMO from targeted proteins. Cleaves precursors of SUM1 and SUM2, but not of SUM3 or SUM5. Able to release SUM1 and SUM2 from conjugates, but unable to cleave SUM3. Protease activity mainly directed at deconjugating SUM1 and SUM2 from their target proteins. Regulates salt stress responses and flowering time. Redundant with ULP1C.

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