# Ubiquitin-like-specific protease ESD4 (ESD4), Recombinant Protein

CD BioSciences
Plant Protein

*Cat* *RP01346*

*Size* *0.02 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg (E-Coli)/ 0.1 mg (Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 0.1 mg (Baculovirus)/ 1 mg (E-Coli)/ 0.1 mg (Mammalian-Cell)/ 1 mg (Yeast)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)*

## Species
Arabidopsis thaliana (Mouse-ear cress)

## Full Product Name
Recombinant Arabidopsis thaliana Ubiquitin-like-specific protease ESD4 (ESD4)

## Product Gene Name
ESD4 recombinant protein

## Product Synonym Gene Name
ESD4

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

## Sequence
MGAVAINRKR SDESFNFINQ QSTNPLRNSP YFQASKKRRF SFAMSEDSGK PASSNPTISR ISRYPDAKAP
LRREIHAPSR GILRYGKAKS NDYCEKDANF FVRKYDDAKR SALEALRFVN KGKDFVDLGD EVEKEEVVSD
DSSVQAIEVI DCDDDEEKKN LQPSFSSGVT DVKKGENFRV EDTSMMLDSL SLDRDVDNDA SSLEAYRKLM
QSAEKRNSKL EALGFEIVLN EKKLSLLRQS RPKTVEKRVE VPREPFIPLT EDEEAEVYRA FSGRNRRKVL
ATHENSNIDI TGEVLQCLTP SAWLNDEVIN VYLELLKERE TREPKKYLKC HYFNTFFYKK LVSDSGYNFK
AVRRWTTQRK LGYALIDCDM IFVPIHRGVH WTLAVINNRE SKLLYLDSLN GVDPMILNAL AKYMGDEANE
KSGKKIDANS WDMEFVEDLP QQKNGYDCGM FMLKYIDFFS RGLGLCFSQE HMPYFRLRTA KEILRLRAD

## Sequence Positions
1-489, Full length protein

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

## Host
E Coli or Yeast or Baculovirus or Mammalian Cell

## Molecular Weight
56,426 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_567478.1

## NCBI GI #
18414542

## NCBI GenBank Nucleotide #

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

Address: SUITE 209, 17 Ramsey Road, Shirley, NY 11967
Tel: 1-631-637-0420
E-mail: info@cd-biosci.com
https://www.cd-biosciences.com/plant-protein/

# Ubiquitin-like-specific protease ESD4 (ESD4), Recombinant Protein

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NM_117680.4

## NCBI GeneID
827269

## NCBI Official Full Name
Cysteine proteinases superfamily protein

## NCBI Official Symbol
ESD4

## NCBI Official Synonym Symbols
ATESD4; DL3980W; EARLY IN SHORT DAYS 4; FCAALL.406

## NCBI Protein Information
Cysteine proteinases superfamily protein

## NCBI Summary
EARLY IN SHORT DAYS 4 Arabidopsis mutant shows extreme early flowering and alterations in shoot development. It encodes a SUMO protease, located predominantly at the periphery of the nucleus. Accelerates the transition from vegetative growth to flowering. Probably acts in the same pathway as NUA in affecting flowering time, vegetative and inflorescence development.

## UniProt Gene Name
ESD4

## UniProt Synonym Gene Names
AtESD4

## UniProt Protein Name
Ubiquitin-like-specific protease ESD4

## UniProt Synonym Protein Names
Protein EARLY IN SHORT DAYS 4; AtESD4

## UniProt Primary Accession #
Q94F30

## UniProt Secondary Accession #
O23439; Q70G10; Q7DLT0; B9DFG4

## UniProt Related Accession #
Q94F30

## 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. Acts predominantly as an isopeptidase, cleaving SUMO-conjugated proteins better than SUMO peptides. Plays an important role in the control of flowering time.

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