

Ubiquitin-like-specific protease ESD4 (ESD4), Recombinant 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 DCDDDEEKN LQPSFSSGVT DVKKGENFRV EDTSMMLDSL SLDRDNDNA SSLEAYRKLM
QSAEKRNSKL EALGFEIVLN EKKLSLLRQS RPKTVEKRVE VPREPFIPLT EDEEADEVYRA FSGRNRKVL
ATHENSNIID TGEVLQCLTP SAWLNDEVIN VYLELLKERE TREPKKYLKC HYFNTFFYKK LVSDSGYNFK
AVRRWTTQRK LGYALIDCDM IFVPIHRGVH WTLAVINNRE SKLLYLDLNL GVDPMILNAL AKYMGDEANE
KSGKKIDANS WDMEFVEDLP QKNGYDCGM 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°C. For long-term storage, store at -20°C or -80°C. Store working aliquots at 4°C 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

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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)

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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