

# Dynamin-related protein 1E (DRP1E), Recombinant Protein

Cat *RP05110*

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## Species

*Arabidopsis thaliana* (Mouse-ear cress)

## Full Product Name

Recombinant *Arabidopsis thaliana* Dynamin-related protein 1E (DRP1E) , partial

## Product Gene Name

DRP1E recombinant protein

## Product Synonym Gene Name

DRP1E

## 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

69,804 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

Dynamin-related protein

## NCBI Accession #

NP\_567094.1

## NCBI GI #

18411520

## NCBI GenBank Nucleotide #

NM\_115882.4

## NCBI GeneID

825189

## NCBI Official Full Name

DYNAMIN-like 1E

## NCBI Official Symbol

DL1E

## NCBI Official Synonym Symbols

**FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY**

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# Dynamin-related protein 1E (DRP1E), Recombinant Protein

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ADL1E; ADL4; ADLP2; ARABIDOPSIS DYNAMIN-LIKE 4; DRP1E; DYNAMIN-like 1E; DYNAMIN-LIKE PROTEIN 2; DYNAMIN-RELATED PROTEIN 1E; EDR3; ENHANCED DISEASE RESISTANCE 3; F27H5.4

## NCBI Protein Information

DYNAMIN-like 1E

## NCBI Summary

At3g60190 encodes Arabidopsis dynamin-related protein 1E, DRP1E, also known as EDR3, ADL4 and ADL1E, which is 624 amino acid residues long, has a predicted mass of 69.8 kDa and a pI of 7.5. Dynamin-related protein 1E belongs to a plant-specific subclass of dynamin-related proteins (DRP1), consisting of five members in Arabidopsis (A, B, C, D, E). This class is characterized by having an N-terminal GTPase domain, a central #Aeodynamin 2#Aeo domain and a C-terminal GTPase effector domain (GED), a typical structure for plant dynamin-related proteins. However, this class lacks a PH domain and a proline-rich domain, which are found in classical animal dynamin-like proteins. Based on work on animal dynamins, the plant DRP1 proteins should be able to form polymeric structures that wrap around membranes to facilitate membrane tubulation and pinching off of vesicles, processes that are essential to vesicle trafficking and membrane compartmentalization. The *edr3* mutation causes a P77L substitution in the G2 motif of the GTPase domain of DRP1E. *edr3* mutant Arabidopsis plants display enhanced cell death in response to powdery mildew infection.

## UniProt Gene Name

DRP1E

## UniProt Synonym Gene Names

ADL1E; ADL4; DLP2

## UniProt Protein Name

Dynamin-related protein 1E

## UniProt Synonym Protein Names

Dynamin-like protein 4; Dynamin-like protein DLP2; Dynamin-like protein E

## UniProt Primary Accession #

Q9FNX5

## UniProt Secondary Accession #

Q9M1C4; Q9SE82

## UniProt Related Accession #

Q9FNX5

## UniProt Comments

Microtubule-associated force-producing protein that is targeted to the tubulo-vesicular network of the forming cell plate during cytokinesis. Plays also a major role in plasma membrane maintenance and cell wall integrity with an implication in vesicular trafficking, polar cell expansion, and other aspects of plant growth and development.

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