

Deoxyribodipyrimidine photo-lyase (PHR1), Recombinant Protein

Cat *RP01005*

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* Deoxyribodipyrimidine photo-lyase (PHR1)

Product Gene Name

PHR1 recombinant protein

Product Synonym Gene Name

PHR1

Purity

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

Sequence

MASTVSVQPG RIRILKKGSW QPLDQTVGPV VYWMFRDQRL KDNWALIHAV DLANRTNAPV AVVFNLFDQF
LDAKARQLGF MLKGLRQLHH QIDSLQIPFF LLQGDAKETI PNFLTECGAS HLVTDFSPLR EIRRCKDEVV
KRTSDSLAIH EVDAHNVVPM WAASSKLEYS ARTIRGKINK LLPDYLIEFP KLEPPKKKWT GMMDKKLVDW
DSLIDKVVRE GAEVPEIEWC VPGEDAGIEV LMGNKDGF LT KRLKNYSTDR NNPIKPKALS GLSPYLHFGQ
VSAQRCALEA RKVRSTSPQA VDTFLEELIV RRELSDNFCY YQPHYDSLKG AWEWARKSLM DHASDKREHI
YSLEQLEKGL TADPLWNASQ LEMVYQGKMH GFMRMYWAKK ILEWTKGPEE ALSISIYLNK KYEIDGRDPS
GYVGCMWSIC GVHDQGWKER PVFGKIRYMN YAGCKRKFNV DSYISYVKSL VSVTKKKRKA EEQLTRDSVD
PKITIV

Sequence Positions

1-496, 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

56,355 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

Deoxyribodipyrimidine photo-lyase

NCBI Accession

NP_563906.1

NCBI GI

18391386

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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NCBI GenBank Nucleotide

NM_101109.1

NCBI GeneID

837792

NCBI Official Full Name

photolyase 1

NCBI Official Symbol

PHR1

NCBI Official Synonym Symbols

F5O11.9; F5O11_9; photolyase 1; TYPE II CPD PHOTOLYASE; UV RESISTANCE 2; UVR2

NCBI Protein Information

photolyase 1

NCBI Summary

encodes an amino acid sequence with significant homology to the recently characterized type II photolyases. The uvr2-1 mutant is unable to remove CPDs in vivo, and plant extracts lack detectable photolyase activity, is sensitive to UV-B and is an allele

UniProt Gene Name

PHR1

UniProt Synonym Gene Names

UVR2

UniProt Protein Name

Deoxyribodipyrimidine photo-lyase

UniProt Synonym Protein Names

AtCPDII; DNA photolyase; Photoreactivating enzyme 1; Protein UV RESISTANCE 2

UniProt Primary Accession

Q9SB00

UniProt Secondary Accession

O24374; Q94CC5; Q9LNA9

UniProt Related Accession

Q9SB00

UniProt Comments

Involved in repair of UV radiation-induced DNA damage. Catalyzes the light-dependent monomerization (300-600 nm) of cyclobutylpyrimidine dimers (CPDs), which are formed between adjacent bases on the same DNA strand

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upon exposure to ultraviolet radiation. Required for plant survival in the presence of UV-B light. Not involved in the repair of (6-4) photoproducts.

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