Violaxanthin de-epoxidase, chloroplastic (VDE1), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP01819*

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)/ 1 mg (Yeast)/ 0.1 mg (Mammalian-Cell)/ 1 mg (Baculovirus)/ 0.5 mg (Mammalian-Cell)*

Species
Arabidopsis thaliana (Mouse-ear cress)

Full Product Name
Recombinant Arabidopsis thaliana Violaxanthin de-epoxidase, chloroplastic (VDE1)

Product Gene Name
VDE1 recombinant protein

Product Synonym Gene Name
VDE1

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

Sequence
VDALKTCACL LKGCRIELAK CIANPACAAN VACLQTCNNR PDETECQIKC GDLFENSVVD EFNECAVSRK KCVPRKSDLG EFPAPDPSVL VQNFNISDFN GKWYITSGLN PTFDAFDCQL HEFHTEGDNK LVGNISWRIK TLDSGFFTRS AVQKFVQDPN QPGVLYNHDN EYLHYQDDWY ILSSKIENKP EDYIFVYYRG RNDAWDGYGG AVVYTRSSVL PNSIIPELEK AAKSIGRDFS TFIRTDNTCG PEPALVERIE KTVEEGERII VKEVEEIEEE VEKEVEKVGR TEMTLFQRLA EGFNELKQDE ENFVRELSKE EMEFLDEIKM EASEVEKLFG KALPIRKVR

Sequence Positions
114-462, 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
52,017 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
Violaxanthin de-epoxidase

NCBI Accession
NP_001031000.1

NCBI GI
79317364

NCBI GenBank Nucleotide

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NM_001035923.3

NCBI GeneID
837377

NCBI Official Full Name
non-photochemical quenching 1

NCBI Official Symbol
NPQ1

NCBI Official Synonym Symbols
ARABIDOPSIS VIOLAXANTHIN DE-EPOXIDASE 1; AVDE1; F22O13.3; F22O13_3; non-photochemical quenching 1; VIOLAXANTHIN DE-EPOXIDASE PRECURSOR

NCBI Protein Information
non-photochemical quenching 1

NCBI Summary
Violaxanthin deepoxidase involved in xanthophyll cycle.Two major consequences of the npq1 mutation are the absence of zeaxanthin formation in strong light and the partial inhibition of the quenching of singlet excited chlorophylls in the photosystem II light-harvesting complex

UniProt Gene Name
VDE1

UniProt Synonym Gene Names
AtVxDE

UniProt Protein Name
Violaxanthin de-epoxidase, chloroplastic

UniProt Synonym Protein Names
Protein NON-PHOTOCHEMICAL QUENCHING 1

UniProt Primary Accession
Q39249

UniProt Secondary Accession
Q9SJD9

UniProt Related Accession
Q39249

UniProt Comments
Part of the xanthophyll (or violaxanthin) cycle for controlling the concentration of zeaxanthin in chloroplasts. Catalyzes the two-step mono de-epoxidation reaction. Stereospecific for all-trans xanthophylls. Zeaxanthin induces the dissipation of excitation energy in the chlorophyll of the light-harvesting protein complex of photosystem II.

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