Calcineurin B-like protein 4 (CBL4), Recombinant Protein

CD BioSciences
Plant Protein

Cat *RP01357*

Size *0.02 mg (E-Coli)/ 0.1 mg (E-Coli)/ 0.02 mg (Yeast)/ 0.1 mg (Yeast)/ 0.02 mg (Baculovirus)/ 0.02 mg (Mammalian-Cell)/ 1 mg (E-Coli)/ 0.1 mg (Baculovirus)/ 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 Calcineurin B-like protein 4 (CBL4)

Product Gene Name
CBL4 recombinant protein

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

Sequence
GCSVSKKKKK NAMRPPGYED PELLASVTPF TVEEVEALYE LFKKLSSSII DDGLIHKEEF QLALFRNRNR RNLFADRIFD VFDVKRNGVI EFGEFVRSLG VFHPSAPVHE KVKFAFKLYD LRQTGFIERE ELKEMVVALL HESELVLSED MIEVMVDKAF VQADRKNDGK IDIDEWKDFV SLNPSLIKNM TLPYLKDINR TFPSFVSSCE EEEMELQNVS S

Sequence Positions
2-222, 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
25,693 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
Calcineurin B-like protein

NCBI Accession
NP_001190377.1

NCBI GI
334187892

NCBI GenBank Nucleotide
NM_001203448.2

NCBI GeneID
832494

NCBI Official Full Name

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Calcium-binding EF-hand family protein

NCBI Official Symbol
SOS3

NCBI Official Synonym Symbols
ATSOS3; CALCINEURIN B-LIKE PROTEIN 4; CBL4; MOP9.19; MOP9_19; SALT OVERLY SENSITIVE 3

NCBI Protein Information
Calcium-binding EF-hand family protein

NCBI Summary
encodes a calcium sensor that is essential for K+ nutrition, K+/Na+ selectivity, and salt tolerance. The protein is similar to calcineurin B. Lines carrying recessive mutations are hypersensitive to Na+ and Li+ stresses and is unable to grow in low K+. The growth defect is rescued by extracellular calcium.

UniProt Gene Name
CBL4

UniProt Synonym Gene Names
SOS3

UniProt Protein Name
Calcineurin B-like protein 4

UniProt Synonym Protein Names
Protein SALT OVERLY SENSITIVE 3

UniProt Primary Accession
O81223

UniProt Related Accession
O81223

UniProt Comments
Acts as a calcium sensor involved in the regulatory pathway for the control of intracellular Na+ and K+ homeostasis and salt tolerance. Binding of a CBL protein to the regulatory NAF domain of a CIPK serine-threonine protein kinase lead to the activation of the kinase in a calcium-dependent manner. Operates in synergy with CIPK24/SOS2 to activate the plasma membrane Na+/H+ antiporter SOS1. Involved in salt stress responses by mediating calcium-dependent microfilament reorganization. The CBL4/CIPK6 complex mediates translocation of AKT2 from the endoplasmic reticulum to the plasma membrane. Both myristoylation and S-acylation are required for AKT2 activation.

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