CBL-Interacting Serine/Threonine-Protein Kinase 23 (CIPK23) Arabidopsis Thaliana Recombinant Protein

PRODUCT OVERVIEW

Product Name	CBL-interacting serine/threonine-protein kinase 23 (CIPK23), Recombinant Protein
Full Product Name	Recombinant Arabidopsis thaliana CBL-interacting serine/threonine-protein kinase 23 (CIPK23)
Product Gene Name	CIPK23 recombinant protein
Product Synonym Gene Name	CIPK23
Sequence	MASRTTPSRS TPSRSTPSGS SSGGRTRVGK YELGRTLGEG TFAKVKFARN VENGDNVAIK VIDKEKVLKN KMIAQIKREI STMKLIKHPN VIRMFEVMAS KTKIYFVLEF VTGGELFDKI SSNGRLKEDE ARKYFQQLIN AVDYCHSRGV YHRDLKPENL LLDANGALKV SDFGLSALPQ QVREDGLLHT TCGTPNYVAP EVINNKGYDG AKADLWSCGV ILFVLMAGYL PFEDSNLTSL YKKIFKAEFT CPPWFSASAK KLIKRILDPN PATRITFAEV IENEWFKKGY KAPKFENADV SLDDVDAIFD DSGESKNLVV ERREEGLKTP VTMNAFELIS TSQGLNLGSL FEKQMGLVKR KTRFTSKSSA NEIVTKIEAA AAPMGFDVKT NNYKMKLTGE KSGRKGQLAV ATEVFQVAPS LYMVEMRKSG GDTLEFHKFY KNLTTGLKDI VWKTIDEEKE EGTDGGGTNG AMANRTIAKQ ST
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	53,514 Da
Sequence Positions	1-482, Full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q93VD3
Species	Arabidopsis thaliana (Mouse-ear cress)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CIPK23 recombinant protein	MBS1341544 is a recombinant protein targeting CIPK23. Also known as Recombinant Arabidopsis thaliana CBL-interacting serine/threonine-protein kinase 23 (CIPK23). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of CIPK23 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CIPK23. It may not necessarily be applicable to this product.

NCBI GI #	18397430
NCBI GeneID	839907
NCBI Accession #	NP_564353.1

UniProt Primary Accession #	Q93VD3
UniProt Secondary Accession #	Q9C753
UniProt Related Accession #	Q93VD3
GenBank Nucleotide #	NM_102766.6
NCBI Official Full Name	CBL-interacting protein kinase 23
NCBI Official Symbol	CIPK23
NCBI Official Synonym Symbols	ATCIPK23; CBL-interacting protein kinase 23; F12P21.6; F12P21_6; LKS1; LOW-K+-SENSITIVE 1; PKS17; SNF1-RELATED PROTEIN KINASE 3.23; SnRK3.23; SOS2-like protein kinase 17
UniProt Protein Name	CBL-interacting serine/threonine-protein kinase 23
UniProt Synonym Protein Names	Protein LOW-K(+)-SENSITIVE 1; SNF1-related kinase 3.23; SOS2-like protein kinase PKS17
Protein Family	CBL-interacting protein kinase
UniProt Gene Name	CIPK23
UniProt Synonym Gene Names	LKS1; PKS17; SnRK3.23
NCBI Protein Information	CBL-interacting protein kinase 23
NCBI Summary for CIPK23	Arabidopsis thaliana CBL-interacting protein kinase 23. CIPK23 serves as a positive regulator of the potassium transporter AKT1 by directly phosphorylating AKT1. CIPK23 is activated by the binding of two calcineurin B-like proteins, CBL1 and CBL9.
UniProt Comments for CIPK23	CIPK serine-threonine protein kinases interact with CBL proteins. Binding of a CBL protein to the regulatory NAF domain of CIPK protein leads to activation of the kinase in a calcium-dependent manner. Downstream of CBL1, CBL2, CBL3 and CBL9, regulates by phosphorylation the K+ conductance and uptake of AKT1 in low K+ condition, in response to calcium signaling and during the stomatal opening regulation by monitoring the turgor pressure in guard cells. In response to low nitrate concentration, phosphorylates NRT1.1, switching it from a low-affinity nitrate transporter to a high-affinity transporter. Confers tolerance to low potassium conditions. Involved in drought sensitivity and leaf transpiration.
Research Articles on CIPK23	**1.** CIPK23 occupies a key position in controlling ion balance and ion homeostasis in the plant cell.
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