

Supplementary information

Protein profiling of water and alkali soluble cottonseed protein isolates

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Supplemental Figure 1. Taxonomy, protein identification and accession number of the polypeptides identified in CSPw and CSPa

Identified Proteins (70)	Taxonomy	RepID	Accession Number
(3R)-hydroxymyristoyl-[acyl-carrier-protein] dehydratase	Gossypium arboreum	A0A0B0MEY6_GOSAR	A0A0B0MEY6
1-acylglycerophosphocholine O-acyltransferase 1	Gossypium arboreum	A0A0B0N8P7_GOSAR	A0A0B0N8P7
2S albumin storage protein	Gossypium hirsutum	Q39787_GOSHI	Q39787
40S ribosomal S3-3-like protein	Gossypium arboreum	A0A0B0MK71_GOSAR	A0A0B0MK71 (+1)
40S ribosomal S5	Gossypium arboreum	A0A0B0PCC1_GOSAR	A0A0B0PCC1
60S ribosomal L23a	Gossypium arboreum	A0A0B0MZ40_GOSAR	A0A0B0MZ40
60S ribosomal protein L14-2	Gossypium arboreum	A0A0B0NJS5_GOSAR	A0A0B0NJS5
Adenosylhomocysteinase	Gossypium arboreum	A0A0B0NW28_GOSAR	A0A0B0NW28 (+1)
ADP,ATP carrier 1, chloroplastic-like protein	Gossypium arboreum	A0A0B0NBX6_GOSAR	A0A0B0NBX6
ALBINO3-like protein 1, chloroplastic	Gossypium arboreum	A0A0B0MQ65_GOSAR	A0A0B0MQ65
ATP synthase subunit beta	Gossypium hirsutum	C6GFP3_GOSHI	C6GFP3
Beta-xylosidase/alpha-L-arabinofuranosidase 2	Gossypium arboreum	A0A0B0NEY9_GOSAR	A0A0B0NEY9
Calcineurin subunit B	Gossypium arboreum	A0A0B0NRG9_GOSAR	A0A0B0NRG9
CBL-interacting serine/threonine-protein kinase 23	Gossypium arboreum	A0A0B0NVJ7_GOSAR	A0A0B0NVJ7 (+1)
Cellular nucleic acid-binding	Gossypium arboreum	A0A0B0MSB9_GOSAR	A0A0B0MSB9
Chaperone DnaJ	Gossypium arboreum	A0A0B0PLC6_GOSAR	A0A0B0PLC6
Chaperonin CPN60-2, mitochondrial	Gossypium arboreum	A0A0B0NFA8_GOSAR	A0A0B0NFA8 (+1)
Desiccation-related PCC3-06	Gossypium arboreum	A0A0B0N9Z5_GOSAR	A0A0B0N9Z5
DNA polymerase alpha catalytic subunit-like protein	Gossypium arboreum	A0A0B0NEL3_GOSAR	A0A0B0NEL3
Elongation factor 1-alpha	Gossypium arboreum	A0A0B0P186_GOSAR	A0A0B0P186
Eukaryotic initiation factor 4A-14	Gossypium arboreum	A0A0B0MUP2_GOSAR	A0A0B0MUP2
Exocyst complex component 7	Gossypium arboreum	A0A0B0PW69_GOSAR	A0A0B0PW69
Flagellar attachment zone 1	Gossypium arboreum	A0A0B0NTH5_GOSAR	A0A0B0NTH5
Fructose-bisphosphate aldolase, cytoplasmic isozyme	Gossypium arboreum	A0A0B0N935_GOSAR	A0A0B0N935
Glucose-6-phosphate isomerase, cytosolic	Gossypium arboreum	A0A0B0MUW2_GOSAR	A0A0B0MUW2 (+1)
Glyceraldehyde-3-phosphate dehydrogenase-2C cytosolic	Gossypium arboreum	A0A0B0MV73_GOSAR	A0A0B0MV73
Golgi to ER traffic 4	Gossypium arboreum	A0A0B0NB99_GOSAR	A0A0B0NB99
Guanylate-binding 5	Gossypium arboreum	A0A0B0PS63_GOSAR	A0A0B0PS63
HEAT repeat-containing 7A	Gossypium arboreum	A0A0B0Q1K1_GOSAR	A0A0B0Q1K1
Heat shock protein 70	Gossypium hirsutum	D2D320_GOSHI	D2D320
Histone H2B	Gossypium arboreum	A0A0B0NGQ0_GOSAR	A0A0B0NGQ0 (+1)
Histone-lysine N-methyltransferase ATX2-like protein	Gossypium arboreum	A0A0B0NJ00_GOSAR	A0A0B0NJ00
Isocitrate dehydrogenase [NADP]	Gossypium arboreum	A0A0B0MIG9_GOSAR	A0A0B0MIG9 (+1)
Kinase PVPK-1	Gossypium arboreum	A0A0B0NGF3_GOSAR	A0A0B0NGF3
Late embryogenesis abundant protein	Gossypium arboreum	A0A0B0P335_GOSAR	A0A0B0P335 (+1)
Late embryogenesis abundant protein D-19	Gossypium hirsutum	LE19_GOSHI	P09443
Legumin A	Gossypium hirsutum	LEGA_GOSHI	P09802
Legumin B	Gossypium hirsutum	LEGB_GOSHI	P09800
Lipid A export ATP-binding/permease MsbA	Gossypium arboreum	A0A0B0NQZ1_GOSAR	A0A0B0NQZ1
Low molecular weight heat shock protein	Gossypium hirsutum	A8WCV3_GOSHI	A8WCV3
Malate dehydrogenase-2C cytoplasmic	Gossypium arboreum	A0A0B0NLV9_GOSAR	A0A0B0NLV9
Mitochondrial 2-oxoglutarate/malate carrier	Gossypium arboreum	A0A0B0PR02_GOSAR	A0A0B0PR02
Oleosin 16.4 kDa	Gossypium hirsutum	OLEO7_GOSHI	P29528
Origin recognition complex subunit 1	Gossypium arboreum	A0A0B0MH05_GOSAR	A0A0B0MH05
Peptidyl-prolyl cis-trans isomerase cyp8	Gossypium arboreum	A0A0B0POB2_GOSAR	A0A0B0POB2
Phosphoglycerate kinase, cytosolic	Gossypium	A0A0B0NN51_GOSAR	A0A0B0NN51
Phototropin-1-like protein	Gossypium arboreum	A0A0B0MNY7_GOSAR	A0A0B0MNY7
Proteasome subunit beta type-6-like protein	Gossypium arboreum	A0A0B0PP74_GOSAR	A0A0B0PP74
Protein argonaute 4-like protein	Gossypium arboreum	A0A0B0NX11_GOSAR	A0A0B0NX11
Protein lin-54	Gossypium arboreum	A0A0B0P3S6_GOSAR	A0A0B0P3S6
Protein neuralized	Gossypium arboreum	A0A0B0PWY7_GOSAR	A0A0B0PWY7
Protein NLP8-like protein	Gossypium arboreum	A0A0B0MLL9_GOSAR	A0A0B0MLL9
Protein yeeZ	Gossypium arboreum	A0A0B0MFB1_GOSAR	A0A0B0MFB1
Putative ATP-dependent RNA helicase DHX36	Gossypium arboreum	A0A0B0PXH7_GOSAR	A0A0B0PXH7
Putative vacuolar sorting-associated protein 13B	Gossypium arboreum	A0A0B0NXF5_GOSAR	A0A0B0NXF5
Putative zinc finger CONSTANS-LIKE 11-like protein	Gossypium arboreum	A0A0B0Q151_GOSAR	A0A0B0Q151
Replication A 70 kDa DNA-binding subunit	Gossypium arboreum	A0A0B0MSM1_GOSAR	A0A0B0MSM1
Rhamnolacturonate lyase	Gossypium arboreum	A0A0B0M5N8_GOSAR	A0A0B0M5N8
RING finger and CHY zinc finger domain-containing 1	Gossypium arboreum	A0A0B0NK68_GOSAR	A0A0B0NK68
Serine/threonine-protein kinase SIK3	Gossypium arboreum	A0A0B0NNV2_GOSAR	A0A0B0NNV2
Transcription factor BIM2-like protein	Gossypium arboreum	A0A0B0PND5_GOSAR	A0A0B0PND5
Transcription initiation factor TFIID subunit 1-B-like protein	Gossypium arboreum	A0A0B0NUG8_GOSAR	A0A0B0NUG8
Vacuolar-sorting receptor 1-like protein	Gossypium arboreum	A0A0B0PFQ0_GOSAR	A0A0B0PFQ0
Vicilin C72	Gossypium hirsutum	VCLB_GOSHI	P09801
Vicilin C72	Gossypium arboreum	A0A0B0N1K7_GOSAR	A0A0B0N1K7
Vicilin GC72-A	Gossypium hirsutum	VCLA_GOSHI	P09799
Vicilin-like antimicrobial peptides 2-1	Gossypium arboreum	A0A0B0PET1_GOSAR	A0A0B0PET1
Vicilin-like antimicrobial peptides 2-2	Gossypium arboreum	A0A0B0PUP3_GOSAR	A0A0B0PUP3
V-type proton ATPase subunit B 1	Gossypium arboreum	A0A0B0PNB1_GOSAR	A0A0B0PNB1 (+1)
Zfy1	Gossypium arboreum	A0A0B0NWH3_GOSAR	A0A0B0NWH3

Supplemental Figure 3. The whole amino acid sequence of Vicilin GC72-A and its peptide fragments (colored) identified in Ca5 and Cw5 gel bands

Ca5 gel band

MVRNKSA CVV	LLFSLFLSFG	LLCSAKDFPG	RRGDDDDPPKR	YEDCRRR RC EW
DTRGQKEQQQ	CEESCKSQYG	EKDQQQRHRP	EDPQRRYE EC	QQE CRQQEER
QRPQCQQRCL	KRFEQEQQQS	QRQFQECQQH	CHQQEQRP ER	KQQCVRECRE
RYQENPWRE	REEEAEEET	EEGEQE QSHN	PFHFHRRSFQ	SR FREEHGNF
RVLQRFASRH	PILRGINEFR	LSILEANPNT	FVLPHH CDAE	KIYLV TNGRG
TLTFLTHENK	ESYNVVPGVV	VRVPAGSTVY	LANQDNKEKL	IIAVLHRPVN
NPRQFEFFFP	AGSQR PQSYL	RAFSREILEP	AFNTR SEQLD	ELFGGRQSHR
RQQGQGMFR K	ASQEQIRALS	QEATSPREKS	GERFAFNLLY	RTPRYSNQNG
RFYEACPREF	RQLSDINVTV	SALQLNQGSI	FVPHYNSKAT	FVVLVNEGNG
YVEMVSPHLP	R QSSFE EEEE	QQQE QEQEEE	RRSGQYRKIR	SQLSR GDIFV
VPANFPVTFV	ASQNQNLRMT	GFGLYNQIN	PDHNQRIFVA	GKINHVRQWD
SQAKELAFGV	SSR LVDEIFN	NNPQESYFVS	RQRQRA SE	

Cw5 gel band

MVRNKSA CVV	LLFSLFLSFG	LLCSAKDFPG	RRGDDDDPPKR	YEDCRRRRC EW
DTRGQKEQQQ	CEESCKSQYG	EKDQQQRHRP	EDPQRR YE EC	QQE CRQQEER
QRPQCQQRCL	K RFEQEQQQS	QR QFQECQQH	CHQQEQRP ER	KQQCVRECRE
RYQENPWRE	REEEAEEET	EEGEQE QSHN	PFHFHRRSFQ	SR FREEHGNF
RVLQRFASRH	PILRGINEFR	LSILEANPNT	FVLPHH CDAE	KIYLV TNGRG
TLTFLTHENK	ESYNVVPGVV	VRVPAGSTVY	LANQDNKEKL	IIAVLHRPVN
NPRQFEFFFP	AGSQR PQSYL	RAFSREILEP	AFNTRSEQLD	ELFGGRQSHR
RQQGQGMFRK	ASQEQIRALS	QEATSPREKS	GERFAFNLLY	RTPRYSNQNG
RFYEACPREF	RQLSDINVTV	SALQLNQGSI	FVPHYNSKAT	FVVLVNEGNG
YVEMVSPHLP	R QSSFE EEEE	QQQE QEQEEE	RRSGQYRKIR	SQLSR GDIFV
VPANFPVTFV	ASQNQNLRMT	GFGLYNQIN	PDHNQRIFVA	GKINHVRQWD
SQAK ELAFGV	SSR LVDEIFN	NNPQESYFVS	RQRQRA SE	