

Plant Erv41p/Erv46p Homologs

NCBI Reference Sequence: NP_001154394.1

>A.thalianaERV-A1
MAGILNKLRLNDAYPKINEDFYRSRTLSGGVITLLSSVVMFLFFSELRLYLHTVTETKLIIVDTSRGETLRI
NFDITFPALACSIILSVDAMDISGELHLDVKHDI IKRRLDSNGNTIEARQDGI GATKIENPLQKHGGRLGHN
ETYCGSCYGAEAEHDCNCSCEDVREAYRKKGWGVTPNDLIDQCKREGFLQRVKDEEGEGCNIYGFLEVNK
VAGNFHFAPGKSFHQSGVHVHDL LAFQKDSFNISHKINRLTYGDYFPGVVNPLDKVEWSQDTPNAMYQYFI
KVVPTVYTDIRGHTIQSNQFSVTEHVKSSEAGQLQSLPGVFFFYDLSPKIVTFTTEHISFLHFLTNTVCAIV
GGVFTVSGIIDAFAIYHGQKAIKKKMEIGKFS

NCBI Reference Sequence: NP_564162.1

>A.thalianaERV-A2
MVGVMNRLRLNDAYPKINEDFYRRTLSGGVITLASSIVMLILFFSELQLYIHPVTETQLRVVDSRGEKLR
NFDVTFPALQCSIIISLSDMISGERHLDVRHDI IKRRLDSSGNVIEAKQDGI GHTKIEKPLQKHGGRLGHN
ETYCGSCFCGAEASDDACCNSCEEVREAYRKKGWALSDPESIDQCKREGFVQKVKDEEGEGCNIYGFLEVNK
VAGNFHFIPGQSFHQSGFQFHDMLLFQQGNYNISHKVNRLAFGDFFPGVVNPLDGVQWNQKQSGVYQYFI
KVVPSIYTDVHQNTIQSNQFSVTEHFQNM EAGRMQSPPGVFFFYDLSPKIVIFEEQHVEFLHFLTNTVCAIV
GGIFTVSGIVDSFIYHGQRAIKKKMEIGKFN

NCBI Reference Sequence: NP_188868.2

>A.thalianaERV-B
MGVKQALRSIDAFPRAEHLLQKTQSGAVVSIVGLLIMATLFLHELSSYLLNTLTVHQMSVDLKRGETLPIH
VNMTFPLPCDVLSDAIDMSGKHEVDLDTNIWKLRLNSHGHIIGTEYISDLVEKGHEHGHS PHKHDGKEE
HKNETETEALNILGFDQAAETMIKKVKQALADGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMI FGGSK
NVNVSHMIHDL SFGPKYPGIHNPLDDTNRILHDTSGTFKYYIKIVPTEYRYLSKDVLS TNQYSVTEYFTPM
TEFDRTPAVYFLYDLSPITVTTIKEERSFLHLITRLCAVLGGTFALTGMLDRWMMFRFIESFNKKPSTRA

NCBI Reference Sequence: NP_567765.2

>A.thalianaPDI7
MVSTSKIKSVD FYRKIPRDLTEASLSGAGLSIIAALSMI FLFGMELNNYLAVSTSTSVIVDRSADGDFLRL
DFNISFPALSCEFASVDVSDVLGTNRLNVTKTIRKFSIDSNMRPTGSEFHAGEVLSLINHGDETGEEIVED
SVPLTGRNFDTFTTHQFPILVVNFYAPWCYWCNLLKPSWEKAAKQIKERYDPEMDGRVILAKVDCTQEGDLC
RRNLIQGYPSIRIFRKGSDLDKDDNAHHDHESYGGDRDTESLVKMVSLSLVEPIHLEPHNLALEDKSDNSRT
LKKAPSTGGCRVEGYMRVKVPGNL MVSARS GSHSFDSSQMNMSHVVNHL SFGRRIMPQKFSFKRLSPYL
GLSHDRDLGRSFINQRDLGPNVTIEHYLQIVKTEVVKSNQALVEAYEYTAHSSVAHSYLLPVAKFHFELS
PMQVLTITENSKSFSHFITNVCAIIGGVFTVAGILDSILHHSMTLMKKIELGKNF

NCBI Reference Sequence: NP_566664.1

>A.thalianaPDI12
MVSSTKLKSVDFYRKIPRDLTEASLSGAGLSIVAALFMMFLFGMELSSYLEVNTTTAVIVDKSSDGDGFLRI
DFNISFPALSCEFASVDVSDVLGTNRLNITKTVRKFPIDPHLRSTGAEFHSGLALHNINHGDETKEEFPDG
AIPLTSASFEALSHHFPILVVNFNAPWCYWSNRLKPSWEKAANI IKQRYDPEADGRVLLGNVDCTEEPALC
KRNHIQGYPSIRIFRKGSDLDREHGHHEHESYGGDRDTSIVKMVEGLVAPIHPETHKVALDGKSNDTVKH
LKKGPVTGGCRVEGYVRVKVPGNLVISAHSGAHSFDSSQMNMSHVVS HFSFGRMISPRLLTDMKRLLPYL
GLSHDRDLGKAFINQHEFGANVTIEHYLQIVKTEVITRRSGQEHSLIEEY EYTAHSSVAQTYLLPVAKFHF
ELSPMQILITENPKSFSHFITNLCAIIGGVFTVAGILDSIFHNTVRLVKKVELGKNI

NCBI Reference Sequence: NP_175508.2

>A.thalianaPDI13
MVSTSKIKSVD FYRKIPRDLTEASLSGAGLSIVAALAMFLFGMELSSYLAINSTSTSVIVDKSSDGDGFLNI
DFNISFPALSCEFASVDVSDVFGTHRLNISKTIKRVPI DPHLRATAEEFHSTSDLHLINHGDEHGDNSTY
ADIPLTGAAFEKFTHHFQILVVNFYAPWCYWSNRLKPSWVKASQITRERYNPGTDDRVLGSDVDCTEEPTL
CKSNHIQGYPSIRIFRSGSLREDHGNHEHESYGGDRDTSLVKMVEELLKPIKEDHKLALDGKSDNAAS
TFKKAPVSGGCRIEGYVRAKKVPGELVISAHSGAHSFDASQMNMSHIVTHLTFGTMVSERLWTDKRLLPYL
LGQSYDRNLNGKSFINERQLDANVTIEHYLQI IKTEVISRRSGQEHSLIEEY EYTAHSSVARSYHYPEAKFH
FELSPMQVLISENPKSFSHFITNVCAIIGGVFTVAGILDSIFQNTVRMVKKIELGKNI

NCBI Reference Sequence: XP_003579883.1

>B.distachyonERV-A1

MDGLMSKLRNLDAYPKVNEDFYSTRLSGGVITLASSFVMLLLFVSELRLYLHAVTETTLRVDTSRGEKLRINFDITFPALQCSIIISIDVMDISGQEHLVDVKHDVFKQRIDANGNVIATKQDAVGGMKVEKPLQMHGGRLEHNETYCGSCYGAEEPGEQCCNSCEDVREAYRKKKGWGSNPDSIDQCKREGFLQTIKDEEGEGCNIYGFVEINKVAGNFHFAPGKSFQQSNVHVHDLDPFQKDSFNVSHKINKLSFGPEFPGVVNPLDGAHWQHSFYQMYQYFVKVVPTVYSHINEQIILSNQFSVTEHARSSESVRMQLPGVFFFYDLSPKIVTFTTERHVSFLHFLTNTVCAIVGGVFTVSGIIDSFVYHGQRAITKKREIGKFN

NCBI Reference Sequence: XP_003558026.1

>B.distachyonERV-A2

MDLWNKLRSLDAYPKVNEDFYSTRLSGGLITIASSLAAILLLFFSEIRLYLYSATESKLTVDTSRGERLHINFDTFPALPCSLVAIDTMDVSGEQHYDIRHDIKFKRIDHLGNVIESRKDGVGSPKIERPLQNHGGRLDHNEYAYCGSCYGSEESDDQCCNSCEEVRDAYRKKGWALTNVESIDQCKREGFVQRLKDEQEGECNIHGFVDVNVKAGNFHFAPGKHLQDSFNFLQDMLNFQPENYNISHKINKLSFGKEFPGVVNPLDGVVEWKQEQATGLTGMYYQYFVKVVPTIYTDIRGRKIHSNQFSVTEHFREAI GFPRPPPGVYFFYEFSPKIVDFTEENTSLHLHFLTNTICAVGGIFTVAGIIDSFVYHGHRAIKKKMEIGKLG

NCBI Reference Sequence: XP_003568216.1

>B.distachyonERV-A3

MDGFLQKLKGLDAYPKVNEDFYKRTLSGGVVTLVSAVVMLLLFISSETSSYLNSATETKLVVDTSRGERLRVNFDTIFPSPICPTLLSVDTRDISGEQHDIRHDIEKKRLNSHGNVIESRKEGIGGAKIERPLQKHGGRLDKGEQYCGTCYGAEESEDEQCCNSCDEVREAYKKGWALTNPDLDIQCAREDFVERVKTQHGEGCSVHGFLDVSKVAGNFHFAPGRGFYESNVDVPELSSLEGGFNITHKINKLSFGTEFPGVVNPLDGAQWTQPASDGTYYQYFIKVVPTNYTDTRGRKIDSNOFSVTEHFRDGNVHPRPQPGVFFFYDFSPKIVIFTEENKSFHLHFLTNTLCAIVGGIFTVSGIIDSFIYHGQKALKKKMEIGKYR

NCBI Reference Sequence: XP_003558212.1

>B.distachyonERV-B

MGRIPSLKFNFAFPHAEDHLLKKTYSGAIVTIFGLIIMFTLVFVHELKFYLTITYTMHQMSVDLKRGETLPIHINMSFPSLPCEVLSVDAIDMSGKHEVDLHTNIWKLRLDKYGTIIGTEYLSDLVEKEHGAHHHDNGHEHHDEEKKPEHTFNEDADKMVKSVRQALENGEGCRVYGMLDVQRVAGNFHISVHGLNIYVAEKIFEGSSHVNVSHVTHELSFGPKYPGIHNPLDDTTRILHDASGTFKYIYKVVPTIYRYLSKQVLPNTQFSVTEYFVPIRPAADRSWPAVYFLYDLSPITVTI KEERRNFLHFITRLCAVLGGTFAMTGMLDRWMYRIIESVSSSKPRSVLR

NCBI Reference Sequence: XP_010237612.1

>B.distachyonPDI-C

MISSSKLKSVDYFARKIPRDLTEASLSGAGLSIVAALAMVFLFGMELSSYLAVNTTTSVIVDRSSDGEFLRIDFNMSFPALSCEFASVDVSDVLGTNRLNITKTVRKFSIDRNLVPTGSEFHS GPIPTVKNKHGDDVEEYHADGSVALSSRNFDYSYHQYPILVVNFYAPWCYWSNRLKPSWEKTAKI IKERYDPEMDGRILLAKVDCTEEGELCKRHHIQGYPSIRIFRKGSDMKENQGHHDHESYYGERDTSLVAAAMETYVGNLPKEAHMLALDDKSNKTVDP AKRPAPMTSGCRVEGFVRVKKVPGSVIISARSGSHSFDPQINVSHYVTQFSFGNRLSPNMFSELKRLIPYVGGHHDRLAGQSYIVKHGDNNANVTIEHYLQIVKTELVTLRSSKELKVFEYEYTAHSSLVHSFYVPVVKFHFEPSMQVLVTELPKSFSHFITNVCAIIGGVFTVAGILDSILHNTLRLVKKVELGKDI

NCBI Reference Sequence: XP_009107911.1

>B.rapaERV-A1

MAGILNKLRLDAYPKINEDFYSTRLSGGVITLVSSVVMFLFFSELRLYLHVSVTETKLVVDTSRGETLRINFDMTFPALACSI LSVDAMDISGELHLDVKHDVVKRRLD SHGNIIESRQDGI GAAKIEKPLQKHGGRLEHNETYCGSCYGAEEAEHDCNSCEDVREAYRKKKGWGVTPNPDLDIQCKREGFLQRVKDEEGEGCNIYGFLEVNVK VAGNFHFAPGKSFHQGGVHVHDL LAFQKDSFNISHKINRLTFGDYFPGVVNPLDKVQWSQDTPNAMYQYFIKVVPTVYTDISGHTIQSNQFSVTEHVKSSEAGQLQSLPGVFFFYDLSPKIVTFTTEEHSFLHFLTNTVCAIVGGVFTVSGIIDAFAIYHGQKAIKKMEIGKFS

NCBI Reference Sequence: XP_009106456.1

>B.rapaERV-A2

MAGVMNRLKNLDAYPKINDDFYSTRLSGGLITLASSLVMLILFFSELRLYLHPVTESQLRVDTSRGEKLRIN
NFDATFPALACSIISLDSMDISGEQHLDRHRDMSKRRLDAYGNVIETRQDGIHTKIENPLQKHGGRLEHN
ETFCGSCYGAEASDDECCNSCEEVREAYRKKGWAMTDPDIIDQCKREGFVQRVKEEEGEGCNI FGFLEVNK
VAGSFHFVPGKTFRQSGFHLQDLLVFQGDSYNI SHKVNSLTFGDRFPGVNVNPLDGVQWTQETLNGMYQYFI
KVVPTHEYTDVRGHVIQSNQFSVTEHFQKTEAGRTQSLPGVFFFYDLSPIKVI FTEQHVEFLHFLTNVCAIV
GGIFTVSGIIDSFVYHGQRAIKKKMEIGKFG

NCBI Reference Sequence: XP_009103253.1

>B.rapaERV-A3

MNRLRNLDAYPKINEDFYNRTLSSGGLITLFFSLLMLILFFSELRLYMHPVTETQLRVDTSRGEKLRINFDV
TFPALQCSIISIDTMDISGERHLDRHDI IKRRLDSHGNVIESKQDGIHTKIEKPLQKHGGRLEHNETYC
GSCFGAETDDTCCNSCEEVREAYRKKGWALSDPESIDQCKREGYVQKVKDEEGEGCNLHGFLEVNVKAVGN
FHFVPGQSFHQSGFQFGDLIFFQGNYNISHKVNRLAFGDFFPVNVNPLDGVQWNQEKQNGVYQYFVKVVP
SIYTDVHGHTIQSNQFSVTEHFQKMEAGRMQSPPGVFFFYDLSPIKVI FEEQHVEFLHFLTNVCAIVGGIF
TVSGIVDSFIYHGQRAIKKKMEIGKFN

NCBI Reference Sequence: XP_009145365.1

>B.rapaERV-A4

MNRLRNLDAYPKINEDFYKRTLSSGGVITLVSSVVMILILFFSELRLYMHPVTESHRLVDTTTRGEKLRINFDV
TFPALQCSIISIDTMDISGERHLDRHDI FKRRLDSHGNI EAKQGGIHTKIEKPLQKHGGRLEDNEKYC
GSCFGAETDDACCNSCEEVREAYRKKGWGLSDPESIDQCQREGYVQKVKDEEGEGCNVHGFVEVNVKAVGN
FHFVPGQSFHQSGFQFHDMMIMFQQGNYNISHKVNRLAFGDFFPVNVNPLDGVQWNQDKQNGVYQYFIKVVVP
TIYTDVHGHTIQSNQFSVTEHFQNAEAGRMQSPPGVFFFYDLSPIKVI FEEQHVEFLHFLTNVCAIVGGIF
TVSGIVDSFIYHGQRAIKKKMEIGKFN

NCBI Reference Sequence: XP_009135799.1

>B.rapaERV-B1

MGVKQALRSIDAFPRaedHLLQKTQSGAVVSI VGLLIMATLFLHELSSYLNLTLVHQMSVDLKRGETLPIH
VNMTFPSLPCDVLSDAIDMSGKHEVDLDTNIWKLRLNSHGHI IGTEYISDLVEKEHDHSSSHKHGDKKEEHK
NETEAVNTLGFDEAAETMIKKVKQALADGEGCRVYGVLDVQRVAGNFHVSVHGLNIYVAQMI FGGSKNVNV
SHMIHDL SFGPKYPGIHNPLDDTNRILRDTSGTFKYI I KIVPTEYRYLSKDVLTTNQYSVTEYYTPMNEFD
RTWPAVYFLYDLSPIVTVIKEERSFLHLITRLCAVLGGTFALTGMLDRWMMFRIIESFTKKPSTRS IHK

NCBI Reference Sequence: XP_009145393.1

>B.rapaERV-B2

MGVKQALRSIDAFPRaedHLLQKTQSGAVVSI VGLLIMVILFLSELSSYLNLTLVHQMSVDLKRGETLPIH
VNMTFPSLPCDVLSDAIDMSGKHEVDLDTNIWKLRLNSHGHI IGTEYISDLVEKEHDHSSSHKHDEHKNET
DALNLLGFDEAAETMIKKVKQALADGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMI FGGSKNVNVSHM
IHDL SFGPKYPGIHNPLDGTNRILHDTSGTFKYI I KIVPTEYRYLSKDILTTNQYSVTEYYTPMNEFDRTW
PAVYFLYDLSPIVTVIKEERSFLHLITRLCAVLGGTFALTGMLDRWMMFRIIESFTKKPSTRS IHK

NCBI Reference Sequence: XP_009145612.1

>B.rapaPDI-C1

MVSPTKLKSMDFYRKIPRDLTEASLSGAGLSIVAALVMMLLFGMELSSYLAVNTTTAVVVDKSADGDFLRI
HFNISFPALSCEFASVDVSDVLGTNRLNITKTIRKFPIDPHLKTGTGEEFHS GHGSHDINHGEETKEEIPDG
SVPLVSSSFD SFSKHFPLLIVNFNAPWCYWSNRLKPSWEKASSIIYHKYNPETDGRVLLGSVDCTEEAELC
KRNHIQGYPSIRIFRKGSDLKEDHGHHEHESYGGDRDTSIVKMVDELVAPIHPETHKLDLDGINSKTLKH
LKKAPVTGGCRVEGYVRVKKVPGNLIISAHSGAHSFDSSKMNMSSHVSHLSFGRMFSRLLTDMRLLPYI
GQSHDKLNEKAFINQHEFGANVTIEHYLQVVKTEVITRRTAQEHSLVEEYETAHSSIAQTYLPAVKFHF
ELSPMQIMITENPKSFSHFITNLCAIIGGVFTVAGILDSIFHNTIRLVKKVELGKNF

NCBI Reference Sequence: XP_009135698.1

>B.rapaPDI-C2

MVSPTKLKSVDFYRKIPRDLTEASLSGAGLSIVAALVMMLLFGMELSSYLEVTTTTAVVVDKSSDGDFLRI
DFNISFPALSCEFASLDVNDVLGTNRLNITKTVRKFPIDPHLKATGGEFHSGLASHHINHGEIEIKQEFDPG
AIQLTNGGFQSLSHHFP L L I V N F N A P W C Y W S N R L K P S W E K A A T I I K Q R Y N P D T D G R V L L G S V D C T E E P A L C
RRNHIQGYPSIRIFRKGNDL KEDHGHHEHESYGGDRDTE SIVKMVDELVAPIHPETHKLALDWGISNDTAK

LLKKAPVTGGCRVEGYVRVKKVPGNLVISAHSGAHSFDSSQMNMSHVVTHLSFGRMIDTRLLTDLKRLLPY
LGQSHDKLDEKAFINQHEFGANVTIEHYLQIVKTEVITRRYQGEHSLTEEHEYTAHSSITQTYLPAKHFH
FELSPMQILITENPKSFSHFITNLCAIIGGVFTVAGIIDSVLHNTIRLIKKVELGKNI

NCBI Reference Sequence: XP_009137636.1

>B.rapaPDI-C3

MVSTSRIKSVDFYRKIPRDLTEATLSGAGLSIVAALSMLFLFGMELNNYLAVSTTTTSIIIVDRSSDGDFLRM
DFNISFPPLSCEFASVDVSDVLGTNRLNVTKTIRKFSIDSNLRPTGSEFHSGEVLSHVNHDEAGEEVEDS
VSLTSRNFDTLLHQFPISVVNFYAPWCYWCNLLKPSWEKAQIKERYDPEMDGRVILAKVDCTQEADLCR
KNHIQGYPSIRIFRQGSDLKDNAHHDHESYYGDRDTESLVKMVIIGLVEPIHLEPHKLALEDKSDNASKTLK
KAPSTGGCRIEGYIRVKKVPGNLMVSARSQSHSFDSTQMNMSHVVNHL SFGRKILPQTFTDLKRLSPYLGQ
SHDRLNRPFFINQRDLGPNVTIEHYLQIVKTEVLKSNGHAMVEEYETAHSSVAHSYYLPAKHFH
FELSPMQVLITENSRSFSHFITNVCAIIGGVFTVAGILDSILHQTM TLMKKIELGKNF

NCBI Reference Sequence: XP_009109150.1

>B.rapaPDI-C4

MISPRKIKSVDFYRKIPRDLTEASLSGAGLSIVAALSMLLLFGMELSSYLTVSTTTTSIIIDRSSDGDFLRM
DFNISFPPLSCEFASVDVSDVLGTNRLNVTKTIRKFSIDSNLRPTGSEFHSGEFLSRVNHGDESAEELVEG
SVSLGARNFDTFLHQYPIVVNFYAPWCYWCNLLKPSWEKAANQIKERYDPEMDGRVILAKVDCTQEADLC
RRNHIQGYPSIRIFRKGSDLRDDNAHHDHESYYGDRDTESLVKMVIIGLVEPIHLEPHKLALEDKSGNASKT
LKKAPSTGGCRIEGYMRVKKVPGNLMVSARSESHSFDTSQMNMSHVVNHL SFGRKILPEAFSDLKRLAPYL
GGSHNRLDDRSFINQHDLGPNVTIEHYLQIVKTEVLKSNGHAMIEEYETAHSSVAHTYYLPAKHFH
FELSPMQVLITENSRSFSHFITNVCAIIGGVFTVAGILDSILHQTM TLMKKIELGKNF

NCBI Reference Sequence: XP_009147793.1

>B.rapaPDI-C5

MVSTTKIKSVDFYRKIPRDLTEASLSGAGLSIIAALAMMFLFGMELSTYLAVTTQTSVVVDNNSDDDFLQI
DFNVSPALSCFATFEVSDVLSSTNRLNLTKTIKKVPIDPHLRDTGEEYHPTPDSDLINHGDEHDDNTYA
AIPLSGGTDFDKISHKFPILVVNFYAPWCYWSRRLRPSWEKAAEITRQKYGPENDGRVLLGSDCTEETPLC
TKYHIQGYPSIRIFHNQSDLRGDDGHQEHDSYHGDRDTESLVKMVEELLRPIKFFDGTNHAASRIRKAPV
GGCRIEGYVRAKVPGEIIVSAVSGSHSFDASRMNMTHFVNHL SFGRILSDRLLTDMKRLPYLGLSHDR
LNGKMFVNEGKFAANVTIEHYLQVVKTEVVSRRFQGEHVSIEEYETAHSSVAHGYYPVAKHFH
FELSPMQVLISENPKSFSHFITNVCAIIGGVFTVAGILDSIFQSTYGMKKVELGKNF

NCBI Reference Sequence: XP_009144931.1

>B.rapaPDI-C6

MVSTTKIKSVDFYRKIPRDLTEASLSGAGLSIIAALAMVFLFGMELSTYLAVTTNTSVIVDNSSDGDFLRI
DFNVSPPLSCEFASVDVSNVLGTRKRLNLTKTIKKVPIDPYLRATGAEVHSTSGLHLINHGDEDHGNTYA
AIPLTGATFDKFSHHFQILVVNFYAPWCYWSNRLKPSWEKAAEITRQRYNPETDGRVLLGSDCTEETPLC
KRNHIQGYPSIRIFRKGSDLKEDHGHHEHESYHGDRDTE SILKMVEELLKPIKEDHKLALDGKTDNVVSG
IKKAPVSGGCRIVGYVRAKVPGEIIISAHSGAHSFDASQMNMSHYVSHLTFGKMI SERLLTDMKRLMPYL
GLSHDRLNSKWFVNEGQFAANVTIEHYLQVVKTEVVSRRFQGEHVSIEEYETAHSSVAHGYYPVAKHFH
FELSPMQVLISENPKSFSHFITNVCAIIGGVFTVAGILDSIFQNTFRLVKKIELGKNI

NCBI Reference Sequence: XP_006305051.1

>C.rubellaERV-A1

MAGILNKLRLNDAYPKINEDFYRSTLSGGVITLSSVVMFLFFSELRLYLHTVTETKLIVDTSRGETLRI
NFDITFPALACSI LSV DAMDISGELHLDVKHDI IKRRLDSNGNTIEARQDGIGATKIEKPLQKHGGRLEHN
ETYCGSCYGAEEAEHDCNCSCEDVREAYRKKGWGVTNPDLIDQCKREGFLQRVKDEEGEGCNIYGFLEVNK
VAGNFHFAPGKSFHQSGVHVHDL LAFQKDSFNISHKINRLTYGDYFPGVVNPLDKVQWSQDTPNAMYQYFI
KVVPTVYTDIRGHTIQSNQFSVTEHVKSSEAGQLQSLPGVFFFYDLSPIKVTFTEEHISFLHFLT
NVCAIVGGVFTVSGIIDAFAIYHGQKAIKKMEIGKFN

NCBI Reference Sequence: XP_006305055.1

>C.rubellaERV-A2

MVGVMNRLRLNDAYPKINEDFYRRTLSGGVITLVSSLLMLVLFSELQLYIHPVTETQLRVDTSRGEKLR
NFDVTFPALQCSII SLSDMDSIGERHL DVRHDI IKRRLDSTGNVIEAKQDGIGHTKIEKPLQKHGGRLEHN

ETYCGSCFGAELSDACCNSCEEVREAYRKKGWALSDPESIDQCKREGFVQKVKDEEGEGCNIHGFLVFNK
VAGNFHFIPGQSFHQSGFQFHDMLLFQOGNYNISHTVNRLAFGDFPPGVVNPLDGVQWNQGGKQSGVYQYFI
KVVPSIYTDVHRNTIQSNQFSVTEHFQGM EAGRMQSPPGVFFYYDLSPKVI FEEQHVEFLHFLT NVCAIV
GGIFTVSGILDSFIYHGQRAIKKKMEIGKFN

NCBI Reference Sequence: XP_006298011.1

>C.rubellaERV-B
MGVKQALRSIDAFPRaedHLLQKTQSGAVVSIVGLLIMATLFLHELSSYLNTLTVHQMSVDLKRGETLPIH
VNMTFPSLPDVLSDVAIDMSGKHEVDLDTNIWKLRLNSHGHIIGTEYISDLVEKGEHGHSSHKHDGKEE
HKNETEIEIETLNSLGFQAAETMIKKVKQALADGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMIFFGGSK
NVNVSHMIHDL SFGPKYPGIHNPLDDTNRMLHETSGETFKYIKIVPTEYRYLSKDVLTSTNQYSVTEYYTPM
TDFDRTPAVYFLYDLSPITVTI KEERRSFLHLITRLCAVLGGTFALTGMLDRWFMRLIESFNKNTNTRSM
H

NCBI Reference Sequence: XP_006297547.1

>C.rubellaPDI-C1
MVSSTKLKSVDFYRKIPRDLTEASLSGAGLSIVAALFMVFLFGMELSSYLEVNNTTTSVIVDKSTDGDFLRI
DFNISFPALSCEFASVDVSDVLGTNRLNITKTIRKFPIDPHLRSTGAEFHSGHTLHHINHGEETKEEFPDG
AIPLTSGSFESLSHHFPI LVVNFNAPWCYWSNRLKPSWEKAANI IKQKYDPETDGRVLLGNVDCTEEPALC
KRNHIQGYPSIRIFRKGSDLREDHGHHEHESYYGDRDTSIVKMVDELVAIHPETHKVALDGKSNDTVKH
LKKAPVTGGCRVEGYVRVKVPGNLVISAHSGAHSFDSSQMNMSHVSHLSFGRMISPRLTDMKRLLPYL
GQSHDRLDGKAFINQHEFGANVTIEHYLQIVKTEVITRRSGLEQAVIEEYETAHSSVAQTYLPAKFHF
ELSPMQILITEDPKSFSHFITNLCAIIGGVFTVAGILDSIFHNTIRLIKVELGKNI

NCBI Reference Sequence: XP_006283569.1

>C.rubellaPDI-C2
MVSTSKIKSVDFYRKIPRDLTEATLSGAGLSIIAALSMLFLFGMELNNYLAVSTSTSVIVDRSSDGDFLRL
DFNISFPALSCEFASLDVSDVLGTNRLNVTKTIRKFSIDSNMRPTGAEFHAGEVLSLINHGDETGEEVAED
SVSLTGRNFETFTHQFPILVVNFYAPWCYWCNLLKPSWEKAQIKERY-----
---DPEMDGRVIVAKVDCTQEGDLRNRNHIQGYPSIRIFRKGSDLKDDNAHHEHESYYGDRDTESLVKMNV
SLVEPIHLEPHNLALEDKSGNSSKTLKAPSTGGCRIEGYMRVKVPGNLMVSARSQSHSFDSSQMNMSHV
VNHL SFGRRILPQKFSSELKRLSPYLGRNHDRLDGRPFINQRDLGPNVTIEHYLQIVKTEVVKSNQVLIIEE
YEYTAHSSVAQSYLPAKFHFELSPMQVLITENSKSFSHFITNVCAIIGGVFTVAGILDSILHHTMTLMK
KIELGKNF

NCBI Reference Sequence: XP_006307368.1

>C.rubellaPDI-C3
MVSTTKIKSVDFFRKIPRDLTEASLSGAGLSIVAALAMLFLFGMELSSYLAVNTSTSVIVDKSSDGDILNI
DFNISFPALSCEFASVDVSDVLGTHRLNLTKTIRKVPIDPHLRATGTEFHSTSGHLINHGDEDHEENTYI
DIPLTGATFEKYKHHFQILVVNFYAPWCYWSNRLKPSWEKASQITRERYDPETDDRVLGSDVCTKESTLC
KSNHIQGYPSIRIFRKGSDLRDDHGHHDHESYYGDRDTSIVKMVEELLKPIKEDHKLALDGKSENAAST
VKKAPVSGGRIEGYVRAKVP GELVISAHSGAHSFDASQMNMSHIVTHLTFGTMVSERLWTDKRLLPYL
GQSHDRLNGKSFINQRQLDANVTIEHYLQIVKTEVISRRFGREHSLIEEYETAHNSVAHSYHYPEAKHFH
ELSPMQVLISENPKSFSHFITNVCAIIGGVFTVAGILDSIFQNTVRLVKKIELGKNI

NCBI Reference Sequence: XP_004142610.1

>C.sativusERV-A1
MESLMNKIRKLDAYPKISEDFYNRTLSSGGFITIIASSIIMFLFFSELRLYVHTATETKLIVDTSRGEHLRI
NFDVTFPALPCSVLSLHAMDISGEQHL DVKHDI VKKRIDYQGNVIDSRPDGIGSTEIERPLQKHGGRKQON
ETYCGSCYGASGEDCCNSCQDVREAYHRKGWALSHPDLDQCKREGFFQRVKNEEGEGCNIYGFLEVNKVA
GNFHFAPGRGFQLSYFQIHNPLASFQWDAFNISHRINRLTFGDDFPGVVNPLDGVQWNQGTLSGMFQYFIK
VVPTVYKAVNGKAIKSNQFSVTQHRLRGIDGESFQALHGVFFYYDLSPKIVTFTEEHISFFHFLT NVCAIVG
GVFTISGILDSIIYHGQKAIKKKMALGKFT

NCBI Reference Sequence: XP_004150658.1

>C.sativusERV-A2

MDNII SKLRNLDAYPKINEDFY SRTL SGGVITLSSSILMLLLFISELR LYLHAVTETKLVVDTSRGETLRI
NFDVTFPALPCSLLSLDAMDISGEQHL DVKHDI IKRRLDSHGNAIEARPDGIGAPKIEKPLQRHGGRL EHN
ETYCGSCF GAESADDDCCNSCEEVREAYRKKGWALSNPDLIDQCKREGFLQRIKDEDEGEGCNIYGFLEVNK
VAGNFHFAPGKSFQQSNVHVHDL LAFQKDSFNISHKINRLAFGEYFPGVVNPLDSVQWKQETPSATYQYFI
KVVPTVYNSVSGYTIQSNQFSVTEHVRTAEVGR LQSLPAVFFFYDLSPIKVTFTTEEHVSFLHFLT NVCAIV
GGVFTVSGILDSFIYHGQKVIKKMEIGKFS

NCBI Reference Sequence: XP_004137169.1

>C.sativusERV-A3
MDAIFNKLRLDAYPKINEDFYRRTFSGG LITLASSFFMLFLFFSEL RMYLHAKTETQLVVDTSRGGELHI
NFDLSFPAIPCSILSLDAIDISGEQHLDIRHNI IKKRIDLHGTVIEARPDGIGAPKIEKPLQKHGGRL EHN
ETYCGSCF GAESADDDCCNSCEEVREAYRKKGWAITNQDLIDQCQREDFIQKVKDEEGEGCNI EGSLEVNK
VAGSFHFVPGKSFYQSSFNFLG LLLALQTS DYNVSHRINRLAFGNHYDGLVNPLDGVHWEYNEQNMVHQYFV
KVVPTIYKNIRGR TVHSNQYSVTEHFKSVEFGSSQSIPGVFFFYDLSPVKVITYTEEHVPFLHFMTHICAI I
GGVFSVAGIIDA FIIYHGQRKMKKKVEIGKFG

NCBI Reference Sequence: XP_011655240.1

>C.sativusERV-B
MGLKQTIKSLDAFPRAEEHLLQKTQTGAFVSVVGLVIMATLFLHEL RYYLSTYTVHQMSVDLKRGETLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNSHGQIIIGTEYLSDLVEKEHVDHKHDHDHDK EKD
HPHIHGFDQAAENLVKKVKQALEEAQGC RVYGVLDVQRVAGNFHISVHGLNIFVAQMI FGGSKHVNVSHMI
HDL SFGPKYPGIHNPLDGTVRILRDTSGTFKYYIKIVPTEYKYISKAVLPTNQFSVTEYFSPMTSDRSWP
AVYFLYDLSPI TVTIKEERSFLHFITRLCAVLGGTFAVTGMLDRW MFRFLEALTKPKRTR

NCBI Reference Sequence: XP_004151953.1

>C.sativusPDI-C
MISSTKLKSVDFYRKIPRDLTEATLSGAGLSIVAALSMVFLFGMELSNYLSVSTSTSVIVDNSTDGDFLRM
DFNISFPALSCFEAAVDVNDVLTGNRLNITKTIRKFSIDSNLRSTGSEFHSGLSNLIKHGDEVDEEANE G
SAVLNTRNFDRYANQHPILVVNFYAPWCYWSNRLKPSWEKA AKTIRERYDPELDGRILMAKVDCTEEGDL C
RKHHIQGYPSIRIFRKGSDVRDDHGHHDHESYYGDRD TDSL VKTMEDLIAPLPAGSQKLALEDKSNNETGN
VKRPAPSAGGCRIEGYVRVKVPGSLVIAARSESHSFDASQMNMSHII SHLSFGRKISPKAFSDAKQLIPY
IGISHDRLNGRSFINQRDLGANVTIEHYLQIVKTEVLT RRS GKLL EY EYTAHSSVSQSLYIPVVKFHFV L
SPMQVVITENQKSF SHFITNVCAIIGGVFTVAGILDALLHNTIRLMKKVELGKNF

NCBI Reference Sequence: XP_006403044.1

>E.salsugineumERV-A1
MAGILNKLRLDAYPKINEDFY SRTL SGGVITLSSSIVMFLFFSEL RLYLHPTVETETKLVVDTSRGETLRI
NFDITFPALACSI LSVLDAMDISGELHLDV KHDI IKRRLDSHGNTIEARQD GIGATKIENPLQKHGGRL EHK
ETYCGSCYGAEEHDDCCNSCEDVREAYRKKGWGVTNPDLIDQCKREGFLQRVKDEEGEGCNIYGFLEVNK
VAGNFHFAPGKSFHQAGVHVHDL LAFHKDSFNISHKINRLTFGDYFPGVVNPLDRVQWGQDTPNAMYQYFI
KVVPTVYTDISGHSIHSNQFSVTEHVKSSEAGQLQSLPGVFFFYDLSPIKVTFTTEEHSFLHFLT NVCAIV
GGVFTVSGIIDA FIIYHGQKAIKKMEIGKFS

NCBI Reference Sequence: XP_006416221.1

>E.salsugineumERV-A2
MVGVMNRLRLDAYPKINEDFYRRTLSGGVITLVSSIVMLI LFFSELQLYLHPVTETQLRVVDTSRGEKLRI
NFDVTFPALQCSII SIDTMDISGERHLDVRHDI IKRRLDSHGNTIEAKQDGI GHTKIEKPLQKHGGRL EHN
ETYCGSCF GAEMTDEACCNSCEEVREAYRKKGWALSDPESIDQCKREGFVQKVKDEEGEGC NVHGFLEVNK
VAGNFHFVPGQSFHHSFGFQFHD LIMFHQGNYNISHKVNRLAFGDFFPGVVNPLDGVQWNQEKQNGVYQYFI
KVVPSVYTD AHENTIQSNQFSVTEHFQNAEAGRMQSP PGVFFFYDLSPIKVI FEEQHVEFLHFLT NVCAIV
GGVFTVSGIVDSFIYHGQRAIKKKMEIGKFN

NCBI Reference Sequence: XP_006390025.1

>E.salsugineumERV-A3
MPGVMNRLRLDAYPKINDDFY SRSLSGGLITLVSSIFMLI LFFSEL RLYLHPVTESQLRVVDTSRGEKLRI
NFDVTFPALACSI IISLDSMDISGEQHL DVRHDI AKRRLDSSGNVIETRQDGI GHTKIENPLQRHGGRL EHN
ETYCGSCYGAEEATDEECCNSCEEVGEAYRKKGWAMSDPEIIDQCKREGFVQRVKDEEGEGCNIYGFLEVNK

VAGSFHFVPGKTFRHS GFHLQDLLAFQGDYNI SHKVNRLTFGDYFPGVVNPLDSVQWTQETLNGMYQYFI
KVVPT EYTDVKEHIIQSNQFSVTEHF EKTEAGHTQSLPGVFFFYDLSPIKVI FTEQHVEFLHFLT NVCAIV
GGIFTVSGIIDSFIYHGQRAIKKKMEIGKFG

NCBI Reference Sequence: XP_006406186.1

>E.salsugineumERV-B

MGVKQALKSIDAFPRAEDHLLQKTQSGAVVSIVGLIIMATLFLHELSSYYLNTLTVHQMSVDLKRGETLPIH
VNMTF PSLPCDVLSDAIDMSGKHEVDLDTNIWKLRLNSHGHIIGTEYISDLVEKEHDHSTHKHEHKNETE
ALNVLGFDQAAETMIKKVKQALADGEGCRVYGVLDVQRVAGNFHVS VHGLNIYVAQMI FGSSKNVNVSHMI
HDLSFGPKYPGIHNPLDDTNRILRDTSGTFKYYIKVVPTEYRYLSKDVLSTNQYSVTEYYTPMNEFDRTWP
AVYFLYDLSPI TVTIKEERSFLHLITRLCAVLGGTFALTGMLDRW MFRFIESFTKKPSTRS IHK

NCBI Reference Sequence: XP_006406369.1

>E.salsugineumPDI-C1

MVSSTKIKSVDFYRKIPRDLTEASLSGAGLSIVAALVMMLLFGMELSSYLEVSTTTAVVVDNSADGDFLRI
TFNISFPALSCEFASVDVSDVLGTNRLNITKTVRKFPI DPHLRRTTGAEFHSGLALHDINHGEESKEEFPDG
AIPLTSGSFESYSHHFPILIVNFYAPWCYWSNRLKPSWEKAANI IKQRYDPETDGRVLLGNVDCTEEAALC
RRNHIQGYPSIRIFRKGSDLRDHDHGHEHESYYGDRDTSIVKMVDGLVAPIHPETHKLALDGISNDTAKN
LKKAPVTGGCRVEGYVRVKVPGNLVISAHSGAHSFDSTQMNMSHVVTHLSFGRMISPRLLTDMRLLPYL
GQSHGRLDEKAFINQHEFGANVTIEHYLQIVKTEVITRKSQGEHSLIEEYETAHSSVAQTYYPVAKFHF
ELSPMQILITENPKSFSHFITNLCAIIGGVFTVAGILDSIFHNTIRLVKKVELGKNI

NCBI Reference Sequence: XP_006413109.1

>E.salsugineumPDI-C2

MVSTSKIKSVDFYRKIPRDLTEATLSGAGLSIVAALSMLFLFGMELNNYLAVSTTTSSIIIVDRSSDGDFLRM
DFNISFPALSCEFASVDVSDVLGTNRLNVTKTIRKFSIDSNLRPTGTEFHSGEVLSLINHGDEAGEELVED
SVSLTGRNFDTLHLHQPPI SVVNFYAPWCYWCNLLKPSWEKAAKQIKERYDPEMDGRVILAKVDCTVESDLC
RRNHIQGYPSIRIFRKGSDLRDDNAHHDHESYYGDRDTESLVKMVI GLVEPIHLEPQRLALEDKSDNASKI
LKKAPSTGGCRIEGYMRVKKVPGNLMVSARS GSHSFDSSQMNMSHVVNHL SFGRRI LPQTFADLKR LSPYL
GRSHDRLDGRPFINQRD LGPNVTIEHYLQIVKTEVVKSNGQALIEEYETAHSSVAQSYYPVAKFHFELS
PMQVLITETSKSFSHFITNVCAIIGGVFTVAGILDSILHQ TMTLMKKIELGKNF

NCBI Reference Sequence: XP_006393093.1

>E.salsugineumPDI-C3

MVSTTKIKSVDFYRKIPRDLTEASLSGAGLSIVAALAMVFLFGMELSNYLAVSTNTSVIVDKSSDGDFLRI
DFNVSF PSLSCEFASVDVSDVLGTSRLNLTKTIRKVPID AHLRATGAEFHSTTGLDLINHGDEDHENNSY
AAIPLTGATFDKFSHHFPILVVNFYAPWCYWSNRLKPSWEKAAEITRQKYDPEDDGRVLLGSVDCTEEPTL
CKRNHIQGYPSIRIFRKGSDLRDHDHGHEHESYYGDRDTE SLLKMVEELLKPIKEDHKLPLDGISVNTAS
SIKKAPVSGGRIEGYVRAKKIPGEVVISAHSGAHSFDASQMNMSHFVTHLSFGKLI SERLLTDMKRLLPY
LGQSHDR LNKWFLNQGQFAANVTIEHYLQIVKTEVVSRRFGQEHSLIEEYETAHSNVAHSYYPVAKFH
FELSPMQVLISENPKSFSHFITNVCAIIGGVFTVAGILDSIFQNTIRLVKKVELGKNI

NCBI Reference Sequence: XP_003544786.1

>G.maxERV-A1

MDSIMSKLRNLDAYPKINEDFY SRTLSSGGVITLASSILMLLLFFSELRLYLHAVTETKLVVDTSRAETLRI
NFDVTFPALPC SILSLDAMDISGEQHL DVKHDI IKKRLDSHG NVIETRQEGIGAPKIEKPLQRHGGRLEHN
ETYCGSCYGAEE SDDCCNSCEDVREAYRKKGWALSNPDLIDQCKREGFLQRIKDEEGEGCNVYGFLEVNK
VAGNFHFAPGKSFQQSGVHVHDL LAFQKDSFNL SHHINRLAFGEYFPGVVNPLDNVHWTQETPSGMYQYFI
KVVPTVYTDVSGHTIQSNQFSVTEHFRTGDVGR LQSLPGVFFFYDLSPIKVTFTENVSFLHFLT NVCAIV
GGIFTVSGILDSFIYHGQRAIKKKMELGKFN

NCBI Reference Sequence: XP_003542443.1

>G.maxERV-A2

MESIISKLRNLDAYPKINEDFY SRTLSSGGVITLASSILMLLLFYSELRLYLHAVTETKLVVDTSRAETLRI
NFDVTFPALPC SILSLDAMDISGEQRL DVKHDI IKKRLDSRG NVIETRQEGIGAPKIEKPLQRHGGRLEHN
ETYCGSCY GSEVSDDCCNSCEDVREAYRKKGWALSNPDLIDQCKREGFLQRIKDEEGEGCNVYGFLEVNK
VAGNFHFAPGKSFQQSGVHVHDL LAFQKDSFNL SHHINRLTFGEYFPGVVNPLDNVHWTQETPSGMYQYFI

KVVPTVYTDVSGHTIQSNQFSVTEHFRTGDMGRQLQSLPGVFFFYDLSPIKVTFTTEENVSFHLHFLTNVCAIV
GGIFTVSGILDSEFIYHGQRAIKKKMELGKFN

NCBI Reference Sequence: XP_003524744.1

>G.maxERV-A3

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QHLDIRHNIVKKRIDANGNVIEERKDGIGAPKIERPLQKHGGRLGHDEKCYGSCFGAEESDEHCCNSCEEV
REAYRKKGWAMTNMDLIDQCQREGYVQRVKDEEGEGCNLQGSLEVNVKAGNFHFATGKSFLQSAIFLADLL
ALQDNHYNISHRINKLSFGHHFPGLVNPDLGVKVVQGPAGHMYQYFIKVVPTIYTDIRGRVIHSNQYSVTE
HFKSSELGVAVPGVFFFYDISPIKVNFKEEHIPFLHFLTNICAIIGGVFTVAGIIDSSIIYQGORTIKRKM
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Phytozome Glycine max Wm82.a2.v1 Proteome ID: Glyma.08G073600.1

>G.maxERV-A4

MDKVFNKLRNLDAYPKVNEDFYNRTLAGGVVTVVSAAVMLFLFFSELSLYLYTVTESKLLVDTSRGDTLHI
NFDVTFPAVRCSILSLDAMDISGEQHLDIRHNIVKKRIDANGNVIEERKDGIGAPKIERPLQKHGGRLGH
EKYCGSCFGAEESDEHCCNSCEEVREAYRKKGWAMTNMDLIDQCQREGYVQRVKDEEGEGCNLQGSLEVNVK
VAGNFHFATGKSFLQSAIFLADV LALQDNHYNISHRINKLSFGHHFPGLVNPDLGVRVWVQGPHTHMYQYFI
KVVPTIYTDIRGRVIHSNQYSVTEHFKSSELGVAVPGVFFFYDISPIKVNFKEEHTPFLHFLTNICAIIGG
VFTVAGIIDSSIIYQGORTIKRKMELGKFT

NCBI Reference Sequence: XP_003542168.1

>G.maxERV-B1

MGMKQVIKNLDAFPRAEDHLLQKTQSGALVSVIGLIIMATLFFVHELGYLLTTYTVHKMSVDLKRGETLPIH
INMTFPSLPDVLSDVAIDMSGKHEVDLDTNIWKLRLNSYGHIIIGTEYISDLVEKEHTNQEHDDNKDHDH
HEHSEQKIHLQNLDESTENIIKKVKEALKNGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMIFDGAKNV
NVSHFIHDLDFGPKYPGLHNPLDDTTRILHDTSGTFKYYIKVVPTIYTDIRGRVIHSNQYSVTEHFKS
FDRTWPAVYFLYDLSPIITVTIKEERSFLHFITRLCAVLGGTFAVTGMLDRWMYRLLLEALTKSKSKR

NCBI Reference Sequence: XP_006605681.1

>G.maxERV-B2

MGMKQVIKNLDAFPRAEDHLLQKTQSGALVSVIGLIIMATLFFVHELGYLLTTYTVHQMSVDLKRGETLPIH
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EQKIHLQNLDESTENIIKKVKEALKNGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMIFDGAKNVNVSH
FIHDLDFGPKYPGLHNPLDDTTRILHDTSGTFKYYIKVVPTIYTDIRGRVIHSNQYSVTEHFKS
WPAVYFLYDLSPIITVTIKEERSFLHFITRLCAVLGGTFAVTGMLDRWMYRLLLEALTKSKSKR

NCBI Reference Sequence: XP_003543298.1

>G.maxPDI-C1

MISSKIKSVDFYRKIPRDLTEASLSGAGLSIVAALAMIFLFGMELNSYLSVTTSTQVIVDKSSDGDYLR
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SVVLKTNQNFQDYAHQFPITVVNFYAPWCYWSQRLKPSWEKAAKIIKERYDPEMDGRIILGRVDCTEDGDL
RSHHIQGYPSIRIFRKGSDVRSNHGHHDHESYGGDRDTSLSVKTMENLVASLPSESQKLPLEDKSDVAKNT
ERPAPSTGGCRIDGYVRVKKVPGNLIISARNSAHSFDASQMNMSHVINHLSFGRKVS PRVMSDVKRLIPYV
GSSHDRLNGRSFINTHDLGANVTMEHYLQIVKTEVITRKDYKLVVEEYETAHSSVAQSLHIPVAKFHLELS
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NCBI Reference Sequence: XP_003540413.1

>G.maxPDI-C2

MISSKIKSVDFYRKIPRDLTEASLSGAGLSIVAALAMIFLFGMELNSYLSVSTSTQVIVDKSSDGDYLR
DFNISFPALSCEFAAVDVSVDLGTNRLNLTKTVRKFSIDSNLRPTGAEFHSEPAANSIKHDNEVNEESVEG
SVVLTTQNFQDYAHQFLITVVNFYAPWCYWSQRLKPSWEKTAKIIKERYDPEMDGRIILGRVDCTEDGDL
RSHHIQGYPSIRIFRKGSDVRSNHGHHDHESYGGDRDTSLSVKTMENLVASLPSESQKLPLEDKSNVATNT
KRPAPSTGGCRIDGYVRVKKVPGNLIISARNSAHSFDASQMNMSHVINHLSFGRKVS LRVMSDVKRLIPYV
GSSHDRLNGRSFINTHDLGANVTIEHYLQIVKTEVITRKEYKLVVEEYETAHSSVAQSLHIPVAKFHLELS
PMQVLITENQKSFSHFITNVCAIIGGIFTVAGIMDAIFHNTIRLMKKVELGKNF

Phytozome *Glycine max* Wm82.a2.v1 Proteome ID: Glyma.12G134500.1

>G.maxPDI-C3

MISATKLKSVDFYRKIPRDLTEASLSGAGLSIVAALVMMFLFGMELSSYMSVSTSTSVIVDKSSDGDYLRIDFNISFPALSCEFASVDVSDVLGTNRLNITKTVRKFSIDSNLRPTGAEFHSGTVANAVKHDDEVDEESVEGSFSLTTHNFDKYVHQFPVTIVNFYAPWCSWCQRLKPSWEKTAKIMKERYDPEMDGRIILAKVDCTQEGDLCRRNHIQGYPSIRIFRKGSDLRSEHGHEHESESYYGDRDTESLVKFMEDLVTSLPTESQKLALEDKSNADNAKRPAPSAGGCRVEGYVRVKVPGNLIISARSDAHSFDASQMNMSHVINNLSFGKKVTPRAMSDVKLLIPYIGSSHDRLNGRSFINTRDLGANVTIEHYIQIVKTEVVTRKGYKLIIEEYEYTAHSSVAHSLDIPVAKFHLELSPMQVLITENQRSFSHFITNVCAIIGGVFTVAGILDSILHNTIRMVKKIELGKNF

NCBI Reference Sequence: XP_003527321.1

>G.maxPDI-C4

MISATKLKSVDFYRKIPRDLTEASLSGAGLSIVAALAMMFLFGMELSSYLSVSTSTSVIVDKSSDGDYLRIDFNISFPALSCEFASVDVSDVLGTNRLNITKTVRKFSIDSNLRPTGAEFHSGTVANAVKHDDEVDEESVEGSFSLTTHNFDKYVHQFPITAVNFYAPWCSWCQRLKPSWEKTAKIMKERYDPEMDGRIILAKVDCTQEGDLCRRNHIQGYPSIRIFRKGTDLRSEHGHEHESESYYGDRDTESLVKFMEDLVTSLPTESQKLALEDKSNASDNARKRPAPSAGGCRVEGYVRVKVPGNLIISARSDAHSFDASQMNMSHFINNLSFGKKVTPRAMSDVKLLIPYIGSSHDRLNGRSFTNTHDLGANVTIEHYIQIVKTEVVTRNGYKLIIEEYEYTAHSSVAHSVDIPAAKFHLELSPMQVLITENQRSFSHFITNVCAIIGGVFTVAGILDSILHNTIRMMKKVELGKNF

***Klebsormidium flaccidum* proteome V1.0: kf100198_0280**

>K.flaccidumERV-A

MGDVLNLYLKKLDAYPKINEDFYSRTLSSGLITLVSSIFIVLLFFTELGLFLTTKTVNELSVDTSRGEQLQINFDVITYPHLACISILSDAMDVSQHLQDLDVHNIKRRLSPEGKPIDVGTKEIGGPKVQTGEVVKVESEGGPAYCGSCWGAEEAEDCCNTCEEVREAYRRKGWAFSNAELIEQCSREGFVEKLKEQEGEGCNVYGYLEVNVK VAGNFHFAPGKSFQQAHMHVHDLMPFASQKFNVSHIINKLSFGADYPGVVHPLDNVRRIQEADGGMYQYFIKVVPTIYTDLSGHVISTNQFSVTEHFREQEVASGRSLPGVFFFYDLSPIKVKFTEQRQSFLHFVTNVCAIIVGGVFTVSGIIDAFAVYHGKVIKKKMELGKLN

***Klebsormidium flaccidum* proteome V1.0: kf100263_0210**

>K.flaccidumERV-B

MAFKIAALSRI DAYPRAESHLTQRTISGAAISIMGISLMVLLFVNELQFYMTPYTENEMTVDVKGREKLPIHINITFPSLPCSVLSLDALDMSGKHEVDISNNIWKARLDSQGRPGIWQQVDKLDHADDTAHNEAHAEDTTEHDFALANARRAAQADANKQVEDIKAALANQEGCRVYGHLDVERVAGNFHISVHGQSYVVLGQVFASASTVN VSHHIESVSFGPPIPGTTNPLDGYTRILKTEQESGTFKYFIKVVPTIEYFPLKGDHVTNQYSVTEYFMPSSMQPGGLPAVYFLYDLSPIAVKVTERRRNFHFLTRICAVLGGTFAVTGMIDKWTYKTVQLFTSQRSSGSQ

***Klebsormidium flaccidum* proteome V1.0: kf100062_0160**

>K.flaccidumPDI-C

MNRVLGRLRSVDFYRRI PRDLTEATLAGGTLSSVVASIAMVLLFGMELQAYLTTSTATTVIIDRSRDGDVMMRINFNFSFPALSCEFASVDVSDVLGTHRINLSKTVRKFPIDHAGRITGPEFHHAHTVREPAHDDPAPDPIDEGAAEMEAKERQLAEGGQPPEGDPPIKDPGGALPLSEATFDTITKESFPIMVNFAPWCPWSQRLEPVWEASAKAMLKKYDVDVNPQILLAKVDCTVEVALCRKHHVQGFPSIRIFRSGQDVRAAQGHHDHESYYGDRTEAAITQFADDLATGLQQRAHALPGATAQQVVPWMMGKDGRALRVVAKAPQSSGCQIEGFVLVKKVPGNLQVA AVSAGHSFDPATMNMSSHVNSFSFGRKPTLKQYHEIDRIWSHHPSAGEDRLTGRYFHSHSDNLTHEHYLQV VLTSVEPLKLP AHQYVQSYDYTAHSNVFNESA AVPVAKFHYELSPMQVVITENSRSFSHFITNVCAIIGGVFTVAGIVDGILFQAASA IKKVQLGKQF

NCBI Reference Sequence: XP_003615024.1

>M.truncatulaERV-A1

MDSIMNKLRLNDAYPKINEDFYSRTLSSGLITIVSSILMLLLFFSELRLYLHAATETKLVVDTSRGETLRI NFDVTFPALACISIVSLDAMDISGEQHLDRHDIKKRIDSHGNVETRQDGI GSPNIEKPLQRHGGRL EHN ETYCGSCYGAEEASDEECCNSCEEVREAYRRKKGWALSSPDSIDQCKREGFLERIKEEEGEGCNVYGFLEVNVK VAGNFHFAPGKSFQQSGVHVHDL LAFQKESFNLSHHINRIAFGDYFPGVVNPLDRVHWTQETPSGMYQYFIKVVPTMYT DVSNGTIQSNQFSVTEHFRTADVGR LQSLPGVFFFYDLSPIKVTFTTEHVSFLHFLT NVCAIIVGGIFTVSGILDSFIYHGQKAIKKKMELGKFS

GenBank: ACJ84247.1

>M.truncatulaERV-A2

MDKVFVFNKLRNLDAYPKVNEDFYNRRTLAGGVVTVVSAAVMLFLFISELRRLYLTVTESKLLVDTSRGETLNI
NFDVTFPAVRCSILSLDMDISGERHHDILHNIMKQRIDANGKVIIEARKEGIGAPKIERPLQKHGGRLEHD
EKYCGSCFGAEESDDHCCNCEEVREAYRKKGWALTNIDLIDQCQREGFVQKVKDEEGEGCNIHGSLEVNK
VAGNFHFATGQSFLQSAIFLTDLLALQDNHYNISHQINKLSFGHHYPGLVNPDLGKQVQGNHGMCCQYFI
KVVPTVYTDIRGRVIHSNQYSVTEHFKSSELGAAVPGVFFFYDISPIKVNFKEEHIPFLHFLTNICAIIGG
IFTIAGIVDSSIYYGQKTIKKKMEIGKYR

GenBank: KEH35189.1

>M.truncatulaERV-B

MGMKQVIKLNDAFPRTEHDLLQKTQSGALVSIIGLIIMATLFLHELGYLLTTYTVHQMSVDLKRGETLPIH
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KDHHEHSEQKVHLQTFDEATENTIKKVKEALKNGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMIFDAG
KNVNVSHVIHDLDFGPKYPGIHNPLDETSRILHDASGTFKYIKIVPTEYRYISKEVLPTNQFSVTEYFSP
ITSQFDRTPAVYFLYDLSPITVTIKEERSFLHFITRLCAVLGGTFAVTGMLDRWMYRLVEAATKPKNKK

GenBank: AES66908.2

>M.truncatulaPDI-C1

MTTASKIKSVDFYRKIPRDLTEASLSGAGLSIVAALAMMFLFGMELNEYLSVHTSTSVIIDKSSDGEFLRI
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AFVFTSNFDFKYSHQFPIITAVNFYAPWCYWSQRLRPSWEKTAKIIRERYDPEMDGRILLGKVDCTKEADLC
RRHHIQGYPSIRIFRKGSDVRSDHGHEHESYYGDRDTSVLKTMENILASFPSEYYKLALEDKLNVTEDS
KRPAPSSGGCRIEGYVRVKVPGNLIISARSDAHSFDASQMNMSHAVHLSFGKLSPKLMSDVQRLIPYV
GNSHDLRLDGLSFINSHDFGANVTLQIVKTEVITRQGYQLVEEYETAHSSLAHSLHVPVARFHLQLS
PMQVLITEDHKSFSHFITNVCAIVGGVFTVAGITESILHNTIRLMRKVELGKNF

NCBI Reference Sequence: XP_003607653.1

>M.truncatulaPDI-C2

MLSASKLKSVDYRKIPRDLTEASLSGAGLSILAALAMMFLFGMELSNYFAVTTSTSVIVDKSSDGDGFLRI
DFNFSFPALSCEFASVDVSDVLGTNRNLNITKTVRKFSIDSKLRPTGSEFHSGTIANAVKHDDEVDTDFVEG
SLPLTSQHFDKYVQLFPIITVNFYAPWCWCQRLKPSWEKAAMKIMRERYDPEMDGRILLAKVDCTQEGDLC
RRHHIQGYPSIRIFRKGSDVRSDHGHEHESYYGDRDTESLVKTMETLVASLPTGSQHLALEDKSNGTGRP
APSTGGCRVEGYVRVKVPGSLVVSARSDAHSFDASQMNMSHVINHLSFGKVTTPRAMIDVKHWIPYLGIN
HDRLNRSFINTRDLEGNVTIEHYIQVVKTEVITRKGKYLIEEYETAHSSVAHSVNIIPVARFHLELSPMQ
VLITENQKFSFSHFITNVCAIIGGVFTVAGILDSILHNTIKAMKKIEIGKNF

GenBank: CAE02574.2

>O.sativaERV-A1

MEGLLSKLRSLDAYPKVNEDFYSRTLSSGIIITLASSVVMLLLFLVSELRLYLHVAVTETTLRVDTSRGETLRI
NFDVTFPALQCSIIISLDAMDISGQEHLDVVKHDFIKQRIDVHGNVIATKQDAVGGMKVEQPLQRHGGRLHNE
ETKCGSCYGAEESEDEQCCNSCEDVREAYRKKGWVSNPDLIDQCKREGFLQSIKDEEGEGCNIYGFLEVNK
VAGNFHFAPGKSFQKANVHVHDLPLPFQKDSFNVSHKINKLSFGQRFPVGNPLDGAQWQHSYSGMYQYFI
KVVPTVYTDINEHIILSNQFSVTEHFRSSESGRIQAVPGVFFFYDLSPIKVTFTQHVSVFLHFLTNVCAIV
GGVFTVSGIIDSFVYHGQRAIKKKMEIGKFN

GenBank: ABF95668.1

>O.sativaERV-A2

MDLWNLKLRSLDAYPKVNEDFYSRTLSSGLLITIASLAILLLLFLSEIRLYLYSATDSKLTVDTSRGERLHIN
FDVTFPALPCSLVAVDVTMDVSGEQHYDIRHDIKKRIDNLGNVIESRKDGVGAPKIERPLQKHGGRLDHNE
VYCGSCYGESESDQCCNSCEDVREAYRKKGWALTNIEEIDQCKREGFVQRLKDEQEGGCSIHGFVNVNKV
AGNFHFAPGKSLDQSFNFLQDLLNFQENYNISHKINKLSFGVEFPVGNPLDGVVWVQEHNTGLTGMYYQY
FVKVVPTIYTDIRGRKINSNQFSVTEHFREAIQYPRPPPGVYFFYEFSPKVDFTTEENTSLHFLTNICAI
VGGIFTVAGIIDSFVYHGHRRAIKKKMEIGKLG

NCBI Reference Sequence: NP_001055898.1

>O.sativaERV-A3

MEGFLQKLKGLDAYPKVNEDEFYKRTLSSGGVTVVASVVMLLLFFVSETRSYFYSAETETKLVVDTSRGERLRV
NFDVTFPSPVCTLLSVDTMDISGEQHHDIRHDIEKRRLDAHGNVIEARKEGIGGAKIESPLQKHGGRLSKG
EEYCGTCYGAEESEDEQCCNSCEEVREAYKKGWALTNPDLDQCTREDFVERVKTQQGEGCNVHGFLDVSK
VAGNLHFAPGKGFYESNINPELSALEHGFNITHKINKLSFGTEFPGVNVPLDGAQWTQPASDGTYYQYFIK
VVPTIYTDLGRKIHNSNQFSVTEHFRDGNIRPKPQPGVFFFYDFSPIKVIIFTEENSLLHLYLTNLCAIVGG
VFTVSGIIDSFIYHGQKALKKKMELGKYR

NCBI Reference Sequence: NP_001051473.1

>O.sativaERV-B

MGRIPSLKNFNAPHAEDHLLKKTYSGAIVTIFGLIIMVTLFAHELKFYLTYYTVHQMSVDLKRGETLPIH
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QKKQEHTFNEDAEMKSVKQAMENGEGRVYGVLDVQVRVAGNFHISVHGLNIFVAEKIFDGSSHVNVSHI
IHDLSFGPKYPGIHNPLDETRILHDTSGTFKYYIKIVPTEYRYLSKQVLPTNQFSVTEYFVPKRATDRSA
WPAVYFLYDLSPITVTIKEERNFLHFLTRLCAVLGGTFAMTGMLDRWMYRLIESVTKSKTRSVLR

NCBI Reference Sequence: NP_001059821.1

>O.sativaPDI-C

MISSSKLKSVDFYRKIPRDLTEASLSGAGLSIVAALAMVFLFGMELSNYLAVNTSTSVIVDRSSDGEFLRI
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SVPLSSRNFDYSYHQYPVLVNFYAPWCYWSNRLKPSWEKTAKIMRERYDPEMDGRIILAKVDCTEEIDLC
RRHHIQGYPSIRIFRKGSDLKENQGHHDHESYYGDRDTESLVAAMETYVANIPKDAHVLALEDKSNKTVDP
AKRPAPLTSGCRIEGFVRVKKVPGSVVISARSGSHSFDPSQINVSHYVTQFSFGKRLSAKMFNELKRLTPY
VGGHHDRLAGQSYIVKHGDVNANVTIEHYLQIVKTELVTLRSSKELKLVVEEYETAHSSLVHSFYVPVVKF
HFEPSPMQVLVTELPKSFSHFITNVCAIIGGVFTVAGILDSIFHNTLRLVKKVELGKNI

NCBI Reference Sequence: XP_001759631.1

>P.patensERV-A1

MALQMIQKLKSLDAYPKINEDFYRSTLSGGIITIIISATFMVLLFFSELKLYLAAQVANDLVVDTERGGTIQ
INLDVTFPALACSVVSLDAMDISGEAHLVDVKNHIFKKRLDVNGKVIIEPARQESINQPKLDKPLQKHGGRL
HNETYCGSCFGAETEEDHCCNCEEVREAYRKKGWALNPNLDLDQCKREGFLQKIKDEDGEGCNVYGTLEA
NKVAGNFHFAPGKSFQQANMHVHDLMAFGKDSFNVSHKINEISFGVRYPGAVNPLDKLERIQTTTHGMYQY
FIKVVPTVYTDTRGRKISTNQFAVTDHFKGVGPGEDHALPGVFFFYDLSPKVKFTEKRMSFFHFLTNVCA
IVGGVFSVSGIIDAFAVYHGQKQIKKRLGKDT

NCBI Reference Sequence: XP_001764962.1

>P.patensERV-A2

MAVFNKQQLDAYPKISEDYRSTLSGGVITLVSTVFMFVLFVTEISLYLSAQTONQLVVDTSRGETLQIN
LDITFPALACSMVSLDAMDISGEQHLNVRHNIFFKRLDVHGKVVNAPKPDAINAPKVQKPLQKHGGRL
ETTCGSCFGAESSDDECCNCEEVREAYRKKGWALTNADLDQCHREGFIERVKEEAGEGECNIYKLEVNK
VAGNFHFAPGKSFQQSAMHLLDLMGFITDSFVNSHTINELSFGAHFPGAVNPLDKVTNIQKDLNGMYQYFI
KVVPTVYTDIKGRKISTNQFSVTEHYTAGDHGPRFVPGVFFFYDLSPKVKFSEERPSFLHFLTNVCAIVG
GVYSIAGIIDSFVYHGHRAIKKKMELGKLS

NCBI Reference Sequence: XP_001754958.1

>P.patensERV-A3

MAIFNKLKQLDAHAKPKISEDYRSTLSGGVITLVSSIFMFLLFVTEFRIYLSAQTONQLVVDTSRGETLQIN
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ETTCGSCFGAESSDDQCCNSCEEVREAYRKKGWALTNADLDQCHREGFIERIKEEAGEGECNIYKLEVNK
VAGNFQIAPGKSFQQSAMHLLDLMGFVTDVNSHTINELSFQAYFPGAVNPLDKVTSIQKDQNGMFQYFI
KVVPTVYTDIKGRKISTNQFSVMEHYTAGDHGPRVPIPGVFFFYDLTPKVKFTEERPSFLHFLTNVCAIIG
GIYTIAGIVDSFIYHGHRAIKKKMELGKLS

NCBI Reference Sequence: XP_001762360.1

>P.patensERV-A4

MSFFNKLKHLDAYPKISEDYRSTLSGGVITLVSSVFMFTLLFITEFRIYLSAQTONQLVVDTSRGETLQIN
LDITFSALACSVVSLDAMDISGEQHLNVRHNIFFKRLDVHGKAIDAPKPDAINAPKVQRPLQKHGGRL
LEHN

ETYCGSCFGAASSDDECCNSCEEVREAYRKKGWALINIDIIDQCHREGFIERVKEEAGEGECNIYGKLEVNK
VAGNFHFIAPGKLFQQSAMHLLDLLGIRSDSFNVSHIVNELSFGAHFPGRVNPLDKITSIQKDQNGMYQYFI
KVVPTVYTDIRGSEIATNQFSVTEHYTAGDHGPRVVPGVFFFDLSPIKVKFTEKRPSFLHFLT TVCAIVG
GVYTVASIIDSFIYHGHRVAVKKKMEIGKFS

NCBI Reference Sequence: XP_001754824.1

>P.patensERV-B
MRKEKWQVIKNLDAFPRAEEHLLQKTSSGAAVSAIGLFIMGVLFHFLRFYLETVTVHEMSVDVKRGEKLP
IHINMTFPALPCEVLSLDAIDMSGKHEVDLDTNIWKLRIHRDGYVLGSEFVNDLVEGEHRKEEPKADKKDE
HKDGDHRKKDPQKVINVEVKKAIIDDGEGCQIFGVLDVERVAGNFHISMHGLSLYVASKIFEAGYEVNVSHVI
HDLSFGPTYPGHHNPLDGSERILHDTSGTFKYFLKIVPTEYHYLHGEVMPNTNQFSVTEYYQRTKPSDRSYP
AVYFVYDLSPIVVTIREHRRNFGHFITRLCAVLGGTFAVTGMLDRWMSRIIDFVMSTSKQGL

Phytozome *Physcomitrella patens* v3.0 proteome: Phpat.014G071500.2

>P.patensPDI-C
MVSTSKLKSIDFYRKIPRDLTEASLSGAGLSIIAALTMVFLFGMELSAYLSTTTSTSVVVDERSRDGEYLRI
DFNLSFPALSCEFASVDVSDVLGTHRFNLTKTVRKYPIDPLLQRIGQEFHAGSVPNIKSHGDEEDVGEDMFE
HLGEGAVELNKNTFDVYAQQFSVLVVNFYAPWCPWSNKLKASWEKAAKI IADKYNPEMDGRILLAKVDCTV
NVELCRSHHIQGYPSIRIFRKGHDVRDEHGRHDHESYGERDTESLVAFMVVELVPPATVDGKFLQLEDKSSI
TVNATIKRPAPKAGGCRVEGFVRVKKVPGELMISAHSGSHSFDATSMNMTHYVGGFFSFRKTSWRSVHWVN
EMLPALDSNIDRLTGQVFPSEYENITHDHYLQVVKTEVITLHRKQDLRVLEQYDYTAHSNMIQSTKVPVVK
FHYELSPMQVLVKENPKSFSHFLTNLCAIIGGVFTVAGIIDSMLHNAMHIMKKVELGKQY

NCBI Reference Sequence: XP_007227487.1

>P.persicaERV-A1
MENMMSRLRNLDAYPKINEDFYRSRTLSGGVITLASSIVMLLLFLSELRLYLHAVTETKLVVDTSRGETLRI
NFDVTFPSALPCSI LSLDAMDISGEQHLDVKHDI IKKRLDSHGNVIESRPDGIGAPKIEKPLQRHGGRLHFN
ETYCGSCYGAEEADEDCNSCEDVREAYRKKGWAI SNPDVIDQCKREGFLQRIKDEEGEGECNIYGFLEVNK
VAGNFHFAPGKSFQQSNVHVHDL LAFQKDSFNISHTINRLSFGDYFPGVVNPLDGVHWAQATPSGMYQYFI
KVVPTVYTDVSGHTIQSNQFSVTEHFRGTEVGNLQYLPGVFFFDLSPIKVTFTTEHISFLHFLT NVCAIV
GGVFTVSGILDSFIYHGQKAIKKKMEIGKFS

NCBI Reference Sequence: XP_007200362.1

>P.persicaERV-A2
MDSILQKLRNLDAYPKINDFFSRTLSGGIITLASSLILLFFSELRLYLHTVTESKLLVDASRGETLHI
NFDVTFPAIRCSLLSLDTMDISGEQHFDIRHDIVKKRIDAHGNVIEAKKDGIGAPKIDNPLQRHGGRLHFN
EKYCGSCFGAEMSDDDCCNSCDEVRDAYRKKGWALTNADMIDQCKREGFIQKIKDEDEGEGECNIEGSLVNK
VAGNFHFVSGKSFHQSNIHVQDLLAFQTDSYNISHKINRLAFGDYFPGKLNPLDGVQWRQETPNGMYQYFI
KVVPTLYTNIRGRTIRSNOYSVTEHFKSSELGHSQLLPGVFFFDLSPIKVTLKEEHVPFLHFMTHICAIV
GGIFTVAGLIDSFVYHGQRAMKKKMEIGKFG

NCBI Reference Sequence: XP_007215619.1

>P.persicaERV-B
MGVKQALKSLDAFPRAEEHLLQKTQTGAVVSVVGLLIMATL FVHELRYLLTTYTVHQMSVDLKRGETLPIH
INITFPSP L PCDVLSVDAIDMSGKHEVDLDTNIWKLRLNSYGHII GTEYLSDLVEREHSKHKHDDSKDHEDK
DQEIHLQGAFDQAAEDLIKRVKHA IANGEGCQVFGVLDVQVRVAGNFHISVHGLNIFVAQMI FEGSKNVNIS
HIIHDLSFGPKYPGIHNPLDGTERRILHDTSGTFKYI KVVPTTEYRYISKEVLPTNQFSVTEYFSPMKQFDR
TWPVAVFLYDLSPIVTITKEERRSFLHFITRLCAVLGGT FALTGMLDRWMYRFLEAVTKPNARSVLR

NCBI Reference Sequence: XP_007213964.1

>P.persicaPDI-C
MISTGKIKSVDFYRKIPRDLTEASLSGAGLSIIAALAMMFLFGMELNSYLAFSTSTSVIVDKSSDGDFLRI
EFNISFPALSCEFASIDVSDVLG TNRLNITKTKIRKFSIGPDLKPTGSEFHSGPAFHDIKHGDGDEYGGDGS
VSITARTFEKFTHQHPILVVNFYAPWCYWSNRLKPSWEKAAKI IRERYDPEIDGRILLAKVDCTEEDLCK
RNHIQGYPSIRIFRKGSDVRDDHGHHDHESYGDRTDLSLVKTMETLVAPI PVEAQKLALEGKSDNGTDNA
KRPAPLTGGCRIEGYVRVKKVPGNLVISAHSGAHSFDASQMNMSHVISHSFSGRMIAPKVMDSVKRLVPYL

GGSHDRNLNGRSFINHRDLGANVTIEHYLQIVKSEVITGRNHKLIEEYETAHSSSLVQSLQIPVAKFHFELS
PMQVLITENQKSFSHFITNVCAIIGGVFTVAGIVDSILHNTIRMMRKVELGKNF

NCBI Reference Sequence: XP_002306582.1

>P.trichocarpaERV-A1
MEGLMSKLRNLDAYPKINEDFYSRTLSSGGVITLASSVVMFLFFSELRLYLHAVTETKLVVDTSRGETLRI
NFDVTFPALPCSILSLDAMDISGEQHLVDVKHDI IKKRLDFHGNVIEARQDGIGAPKIEKPLQRHGGRLEHN
ETYCGSCYGAEASDEDCCNSCEDVREAYRKKGWAVTNPDLMDQCKREGFLQKIKDEEGEGCNIYGFLEVNK
VAGNFHFAPGKSFQQSGVHVHDLALAFQKDSFNITHKINRLTFGEYFPGVVNPLDGVQWTQETPSGMYQYFI
KVVPTVYTDVSGHTIQSNQFSVTEHFRGTDIGRLQSLPGVFFFYDLSP IKVTFTEEHVSVFLHFLT NVCAIV
GGVFTVSGILDTFIYHGQKAIKKKMEIGKFS

NCBI Reference Sequence: XP_002302286.1

>P.trichocarpaERV-A2
MDGLMSKLRNLDAYPKINEDFYSRTLSSGGVITLASSIVMFLFFSELRLYLHAVTETKLVVDTSRGETLRI
NFDVTFPALPCSILSLDAMDISGEQHLVDVKHDI IKKRLDSHGNVIESRQDGIGAPKIEKPLQRHGGRLEHN
ETYCDEDCCNSCEEVREAYQKKGWAVTNPDLMDQCKREGFLQRIKDEEGEGCNIYGFLEVNVVAGNFHFAP
GKSFQQSGVHVHDLALAFQKDSFNTHKINRLAFGEYFPGVVNPLDGVQWTQETPSGMYQYFIKVVPTVYTD
VSGHTIQSNQFSVTEHFRGADIGRLQSLPGVFFFYDLSP IKVTFTEEHVSVFLHFLT NVCAIVGGVFTVSGI
LDSFIYHGQKAIKKKMEIGKFS

Phytozome *Populus trichocarpa* v3.0 Proteome: Potri.001G206100.1

>P.trichocarpaERV-A3
MEGIYQKLRNLDAYPKINEDFYSRTLSSGGLITLISSIIIMLFLFFSEFSLYLHAVTETKLLVDTTRGQTLRI
NFDITFPAIRCSLLSVD AIDISGEQHDIRHDITKKRINAHGDVIEVRQDGIGAPKIDKPLQKHGGRLEHN
EEYCGSCFGAEMSDHCCNSCDEVREAYRKKGWALTNMDLIDQCIREGFVQMIKDEEGEGCNIINGSLEVNR
VAGNFHFVPGKSFHQSNFQLLDLDMQKESYNI SHRINRLAFGDYFPGVVNPLDGIQLMHETQNGVQQFFI
KVVPTIYTDIRGRTVHSNQYSVTEHFTKSELMLRDLSPGVIYDFSP IKVTFKEEHTSFLHFMTSICAI I
GGIFTIAGIVDSFIYHGRRAIKKKMEIGKFS

Phytozome *Populus trichocarpa* v3.0 Proteome: Potri.003G023500.1

>P.trichocarpaERV-A4
MDRIYQKVRNLDAYPKINEDFYSRTLSSGGLITLISSVLI LFLFFSELSLYLHKVTETKLLVDTSRGQSLRI
NFDVTFPAIRCSLLSVD AIDISGEQHDIRHDISKRINAHGDVIEVRQEGIGAPKIDRPLQSHGGR LGHN
EEYCGSCFGGEMSHDDCCNTCEEVREAYRKKGWAMTNMDLIDQCKREGFIQMIKDEEGEGCNIINGSLEVNR
VAGSFHFAPWKSFHLSNFLIQDLLDLQKDSYNI SHRINRLAFGDYFPGVVNPLAGIQLMHDTPNGVQQFFI
KVVPTIYTDIRGRTVHSNQYSATEHFKKSELTPLDSLPGVYFFYDFSP IKVIFKEEHISFLHFMTSICAI I
GGIFTIAGIIDSFIYYGQRAITKKVGIGKFG

NCBI Reference Sequence: XP_002307923.1

>P.trichocarpaERV-B1
MGMKQAIKKLDAFPRAEEHLLQKTQSGALVSI IGLVTMATLFYHELAYYLT TTYTVHQMSVDLTRGETLPIH
INITFPSLPDVL SVDAIDMSGKHEVDLDTSIWKLRLNSYGHITGTEYLSDLVEKEHEAHNHDHNDHHDHED
SHAKQHTHGFDAAETMVKVKQALANGEGCRVYGVLDVQVRVAGNFHISVHGLNIFVAQMI F DGAKHVNVNS
HIIHDL SFGPKYPGIHNPLDGTTRILHETSGTFKYIKIVPTEYRYISKEVLPTNQFSVTEYFSPMTDFDR
TWPVAVYFLYDLSPITVTIKEERRSFLHFITRLCAVLGGTFALTGMLDRWMCRLLEALTKPNRPSVLR

Phytozome *Populus trichocarpa* v3.0 Proteome: Potri.016G022800.3

>P.trichocarpaERV-B2
MGVKQAIKSLDAFPRAEEHLLQKTQSGALVSVI GLVIMATLFYHELAYYLT TTYTVHQMSVDLQRGEILPIH
VNITFPSLPDVL SVDAIDMSGKHEVDLDTNIWKLRLNSHGHITGTEYLSDLVEKEHEAHNHDHDKDHHKD
SHEEQHTHGFDAAETMIKKVKQALANGEGCRVYGVLDVQVRVAGNFHISVHGLNIFVAQMI F DGAKHVNVNS
HIIHDL SFGPKYPGIHNPLDGTARILRETSGIFKYIKIVPTEYRYISKDVLPTNQFSVTEYFSPITDFDR
TWPVAVYFLYDLSPITVTIKEERRSFLHFITRLCAILGGTFALTGMLDRWMYRLLLEALTKPNRSGSGL

NCBI Reference Sequence: XP_002317580.1

>P.trichocarpaPDI-C1

MVSTNKLKSVDFYRKIPRDLTEASLSGAGLSIVAALAMMFLFGMELNNYLTVNTSTTVIVDNSSDGEFLRI
DFNISFPPLSCEFASVDVSDVLGTNRLNITKTIRKFSIDHDLKPTGSEFHSGPVLHQIKHGDEVDEEGGEG
SVSLKAHNFDQYSHQYPILVVNFFAPWCYWSNRLKPSWEKAAKIIRERYDPEMDGRILLAKVDCTEEGDLC
RRNHIQGYPSIRIFRKGSNLREDHGRHDHESYYGDRDTESLVKTMEALVAPIAMESQRQALEHKPENATQH
VKRPAPSAGGCRIEGYVRVKVPGNLMISALSGAHSFDSKQMNLSHVISHFSFGMKVLPVMSDVKRLLPY
IGRSHDKLNGRSFINHRDVGANVTIEHYLQVVKTEVVTRSSSERKLIIEEYETAHSSLSQTVYMPATAKFH
FELSPMQVLITENSKSFSHFITNVCAIIGGVFTVAGILDSILHHTVRMMKKVELGKNF

NCBI Reference Sequence: XP_006370647.1

>P.trichocarpaPDI-C2

MVSTNKLKSVDFYRKIPRDLTEASLSGAGLSIVAALAMVFLFGMELNNYLTVNTSTSVIVDNSSDGEFLRI
DFNLSFPPLSCEFASVDVSDVLGTNRLNITKTIRKFSIDHDLKPTGSEFHSGPVLHHINHGDEVHEEGSEG
SVSLKAHNFDQYTHQYPILVVNFYAPWCYWSNRLKPSWEKAAKIIRERYDPEIDGRILLAKVDCTEEGDLC
RRNHIQGYPSIRIFRKGSDLRDDHGHHDHESYYGDRDTESLVKTMEGLVAPIAMESQRHALEHKPENATEH
VKRPAPSAGGCRIEGYVRVKVPGNLVISARSGAHSFDSAQMNLSHVISHFSFGMKVLPVMSDVKRLIPH
IGRSHDKLNGRSFINHRDVGANVTIEHYLQVVKTEVVTRSSAEHKLIEEYETAHSSLAQTVYMPATAKFH
FELSPMQVLITENPKSFSHFITNVCAIIGGVFTVAGILDSILHNTFRMMKKVELGKNF

NCBI Reference Sequence: XP_007141162.1

>P.vulgarisERV-A1

MEGIMSKLRNLDAYPKINEDFYRSTLSGGVITLASSIIMLLFFSELRLYLQSVTETKLVVDTSRGETLRI
NFDVTFPALPCSILSLDAMDISGEQHLDVKHDIKRLDSDHGNVIESTRQEGIGAPKIEKPLQRHGGRLEHN
ETYCGSCFGAEASDDCCNSCEDVREAYRKKGWALSNPDLIDQCKREGFLQRIKDEDGEGCNVYGFLEVNK
VAGNFHFAPGKSFQQSGVHVHDLALFQKDSFNLSHHINRLSYGEYFPGVVNPLDNVHWIQETPSGMYQYFI
KVVPTVYTDVNGHAIQSNQFSVTEHFRTGDVGRQLQSLPGVFFFYDLSPKIVTFTEEHVSFLHFLTNTVCAIV
GGIFTVSGILDSFIYHGQRAIKKMEIGKFN

NCBI Reference Sequence: XP_007159091.1

>P.vulgarisERV-A2

MDKVFNKLRNLDAYPKVNEDEFYRSTLAGGVTVVSAAVMLFLFFSELNLYLYTVTESTLLVVDTSRGTDLHI
NFDVTFPAVRCSILSLDAMDISGEQHLDIRHNIVKKRIDANGNVIEERKDGIGAPKIERPLQKHGGRRLGHD
EKYCGSCFGAEETDEQCCNSCEEVREAYRKKGWALSNMDLIDQCQREGYVQVRVKDEEGEGCNIQGSLEVNK
VAGNFHFATGKSFQSAIFLADLLALQDNHYNISHRINKLSFGHHFPGLVNPLDGVKWWQGPHTHGMYYQYFI
KVVPTIYTDIRGRVIHSNQYSVTEHFKSSELGVAVPGVFFFYDISPIKVNFKEEHIPFLHFLTNTVCAIIGG
IFTVAGIIDSSIIYQGRTIKKMEIGKYT

NCBI Reference Sequence: XP_007145973.1

>P.vulgarisERV-B

MGMKQVIKNLDAFPRAEDHLLQKTQSGALVSVIGLIIMATLFFVHELRYLTYTVHQMSVDLKRGETLPIH
INMTFPSLPCDVLSDAIDMSGKHEVDLDTNIWKLRLNSDGHIIGTEYISDLVEKGGHTHHKHDDHDKHDEH
SEQKIHLQNLDESTENI IKKVKEAIKNQEGCRVYGVLDVQVRVAGNFHISVHGLNIYVAQMI FGDGAKNVNVS
HVIHDLDFGPKYPGIHNPDDTNRILHDTSGTFKYIKVVPTEYRYISKEVLPTNQFSVSEYYSPINQFDR
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NCBI Reference Sequence: XP_007149711.1

>P.vulgarisPDI-C1

MISSKCLKSVDFYRKIPRDLTEASLSGAGLSIVAALCMVFLFGMELNSYLSVSTATSVIVDKSSDGDYLR
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ALELTTDNFDKYAHQFPITVINFYAPWCYWSQRLRPSWEKASKI IKERYDPEIDGRIVMGRVDCQNGELC
RSHVQGYPSIRIFRKGSDVRTDHGHHDHESYYGDRDTESLVKTMDNLVASLPTESQKSHSGDKSNLASHI
KRPAPSSGGCRIEGYVRVKVPGNLIISARSDAHSFDASQMNMSHVVNHLVSGRQVSPRMSDVKRLIPYV
GSSHDRLNGLSFINTRDFGANVTMEHYLQIVKTEVITRKDHKLVEEYETAHSSVAQSLHIPVAKFHLELS
PMQVLITENPKSFSHFITNVCAIIGGVFTVAGILDSILHNTIRLMKKVELGKNF

Phytozome Phaseolus vulgaris v1.0 proteome: Phvul.011G139400.1

>P.vulgarisPDI-C2

MISATKLKSVDFYRKIPRDLTEASLSGAGLSIVAALSMFLFGMELSNYLTVSTSTSVIVDKSSDHDYLRI
DFNISFPALSCEFASVDVSDVLTGNRLNITKTVRKFSIDSHLRPTGAEFHSGAVSNAVKHDDEVDGESVEG
SFSFTTHNFDKYAHQFPITVVNFYAPWCSWCQRLKPSWEKTAKIMKERYDPEMDGRIIMGKVDCTLEGDLC
RRNHIQGYPSIRIFRKGSDLRSEHGHEHESESYYGDRDTESLVEFMENLVTSLPTASQKPALEDKSNATDNA
KRPGPSAGGCRIEGYVRVKVPGNLIISARSDAHSFDASQMNMSHVNNLSFGKKVTPRAMSDVKLLIPYL
GSSHDRLSGRSFNSNTRDFGANVTIEHYIQIVKTEVVNRKGYKLIEEYETAHSSVAHSVDIPVAKFHIELS
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NCBI Reference Sequence: XP_002447951.1

>S.bicolorERV-A1
MDGLLSKLRSLDAYPKVNEDFYSRTLSSGGVITLASSVIMLLLFVSELRLYLHAVTETTLRVDTSRGETLRI
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ETYCGSCYGAQESDQCNSCEDVREAYRKKKGWVSNPDLDDQCKREGFLQSIKDEEGEGCNIYGFIEVVK
VAGNFHFAPGKSFQQSNVHVHDLDPFQKDSFNVSHKINRLSFGGEYFPGVVNPLDGASWVQHSSYGMYYQFI
KVVPTVYTDINEHIILSNQFSVTEHFRSGESGRMQALPGVFFFYDLSPKIVTFTEQHVSFLHFLTIVCAIV
GGVFTVSGIIDSFVYHSQRAIKKKMEIGKFN

NCBI Reference Sequence: XP_002465347.1

>S.bicolorERV-A2
MELWSKLRNLDAYPKVNEDFYSRTLSSGLLITILSSLAILLFFSEIRLYLYSATESKLTVDTSRGERLHIN
FDVTFPALPCSLVAVDTMDVSGEQHYDIRHDITKKRIDHLGNVIESRKDRVGPAPIERPLQKHGGRLDHNE
VYCGSCYGAEEETDDQCCNSCEEVRDVYRKKGWAINNVELIDQCKREGYVQRLKDETEGEGCTIHGFVNVNKV
AGNFHFAPGKSLDQSFNQLDILLNIQPETYINISHKINKLSFGGEFPGVVNPLDGVEWIQDNSNGLTGMYQY
FVKVVPTIYTDIRGRKIYSNQFSVTEHFREAIGYPRPPPGVYFFYEFSPKIVDFTEENTSLHLHFLTIVCAI
VGGIFTVAGIIDSFVYHGHRAIKKKMELGKLG

NCBI Reference Sequence: XP_002439992.1

>S.bicolorERV-A3
MDAFLQRLKRLDAYPKVNEDFYKRTLSSGIVTLVAAVVMLLLFISETRSYFYSATETKLVVDTSRGERLRV
NFDITFPSPICPTLLSVDTMDISGEQHDIRHDIEKRRLDSHGNVIEARKEGIGGAKIERPLQKHGGRLDKG
EQYCGTCYGAEEESDEQCCNSCEEVREAYKKGWALTNPDLIDQCAREDFVERVKTQQDEGCNVHGFLDVSK
VAGNFHFAPGKGFYESNIDVPELSVLEGGFNITHKINKLSFGTEFPGVVNPLDGAQWIQPASDGTYYQFIK
VVPTIYTDIRGHNIHSNQFSVTEHFRDGNILPKPQPGVFFFYDFSPKIVIFTEENRSLHLHFLTIVCAIVGG
VFTVSGIIDSFIYHGQKALKKKMELGKYR

NCBI Reference Sequence: XP_002458688.1

>S.bicolorERV-B
MARIPSLKSLNAPPHAEHLLKKTYSGAVVTILGLLVMITLHVHELQFYLTYYTVHQMSVDLKRGETLPIH
INMSFPPLPCEVLSVDAIDMSGKHEVDLHTNIWKLRLDKYGHIIIGTEYLSDLVEKKGHGAHHDHHDGQEHHD
EQKKPEQTFNEEAEMIKSVKQALGNGEGRVYGMLDVQRVAGNFHISVHGLNIFVAEKIFEGSSHVNVSH
VIHELSTFGPKYPGIHNPLDETSRILHDTSGTFKYYIKVVPTIYKYLKSKVLPTNQFSVTEYFLPIRPSDRA
WPAVYFLYDLSPITVTIKEERNFLHFITRLCAVLGGTFAMTGMLDRWYRLIESVTNSKTRSVLR

Phytozome *Sorghum bicolor* v2.1 proteome: Sobic.002G322400.1

>S.bicolorPDI-C
MISSKLRKSVDFYRKIPRDLTEASLSGAGLSIVAALAMVFLFGMELSNYLAVNTTTSVIVDRSSDGEFLRI
DFNISFPALSCEFASVDVSDVLTGNRLNIRKTVRKYSIDRNFPVPTGSEFHPGPIPTVKNKHGDDVEEDHVDG
RFLSSRNRFDSFVSHQYVPLVVNFYAPWCYWSNRLKPSWEKTAKIIRERYDPEMDGRILLGKVDCTEEVDLC
RRHHIQGYPSIRVFRKGSIDIKENQGHHDHESYYGERDTESLVAAMETYVANIPKEAHVLALEDKSNKTADP
AKRPAPMTSGCRIEGFVRVVRVPGSVIVAARSGSHSFDPSQINVSHYVTQFSFGKRLSHRMLDEFTRLTPY
LSGYNDRLAQSYIVKHGEVNAVNTIEHYLQVVKTEIVTQRSSKELKVLVEEYETAHSSLVHSFYVPVVKF
HVEPSPMQVLVTEVPRFSHFITNVCAIIGGVFTVAGILDSIFHNTLRMVKKVELGKNI

NCBI Reference Sequence: XP_004237893.1

>S.lycopersicumERV-A1
MDSFVSKIRSLDAYPKINEDFYSRTLSSGGVITLASSIIMTLLFISELRLYLHAATETKLVVDTSRGETLRI
NFDITFPAIPCSILSVDAMDISGQHLDIRHDIKRRIDVLGNVIETRKEGIGSPTIDRPLQRHGGGRLEHN

ETYCGSCYGAEGSDDDHCNTCEDVREAYRKKGWALTNPDEIDQCKREGFLEKIKEEEGEGCNMYGFLEVNK
VAGNFHFAPGKSFQQSNVHVHDLTTFQKDSYNI SHKINRLTYGEYFPGVVNPLDGVKWTQETPHGMYQYFI
KVVPTVYTDVSGHTIQTNQFSVTEHFKGADGFRFQSI PGVFFFYDLSPIKVTFTTEQHASFLHFLTINVCAIV
GGVFTVSGILDSFIYHGQKAIKKKMELGKFS

NCBI Reference Sequence: XP_004230558.1

>S.lycopersicumERV-A2
MERVFSKLRNLDAYPKINEDFYNRTLSSGGIITLVASVIMLVLFVNELGLYIHSYTETQLVVDTSRGGKLIH
HFDITFPVAVPCSLLSLDARDISGEEHFDIRHDI FKKRIDSHGAVIEVRQDGIGAPKIEKPLQRHGGRLLEHN
ETYCGSCFGAETADDECCNSCEEVREAYRKRGGWMTNPDLDQCKREGFVQKIKDEEGEGCNIHGSLEVNK
VAGNFHFAAGKSFHQSTFQLFELISLQSDTYNISHRVNKLAFGDSIPGVVNPLDGVQWTQEAQNGMYQYFI
KVVPTIFKGVGRGTIDSNQFSVTEHFKGSDLGLFQSI TGVYFFYDLSPIKVTFTTEHVSFFHFLTINVCAII
GGVFTVAGILDACIYHSQKAIKKKVELGKFG

NCBI Reference Sequence: XP_004243621.1

>S.lycopersicumERV-B1
MGVKQVLRAMDAFPRAEEHLLQKTKSGAFVSI VGLVIMSTLFLHELSSYLLNTITVHQMAVDLRRGETLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNSDGHITGTEYLSDLVEKEHKHDDHKDHHDDSDN
KTHMQGFDQEAENLIKVKQALAHGEGCRVYGVLDVQRVAGNFHISVHGLNIFVAQMI FGGTTHVNVSHII
HDLSFGPKYPGGHNPLDGTERRILRGASGTFKYYIKIVPTEYRYLSKEVLPTNQFSVSEYFSPINEFDRTWP
AVYFLYDLSPIITVTIREERNFLHFITRLCAVLGGTFALTGMLDKWMMFRFLEAVMKNRSRSLVR

NCBI Reference Sequence: XP_010313686.1

>S.lycopersicumERV-B2
MGVKQALRAIDAFPRAEHLLKTKFGAFVSI VGLLIMVTLFLHELSSYLLNIYTVHQMSVDSRRGENLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNSDGHITGTEYLSDLVEKEREAHKHVDVHKEHHED
SDKIHLQGIDEE SQNMIKKVKQALADGEGCRVYGVLDVQRVAGNFHLSVHGLNIFVAQMI FEKSTHVNVSH
II HDLSFGPKYPGIHNPLDGTSRILRGTSGTFKYYIKVVPTEYRYISKEVLPTNQFSVTEYFSP IHD FERT
WPAVYFLYDLSPIITVTIREERSFLHFITRLCAVLGGTFALTGMLDGWMYKILES SVTKKNSRTIVR

NCBI Reference Sequence: XP_004244141.1

>S.lycopersicumPDI-C
MVSTSKIKSVD FYRKIPRDLTEASLSGAGLSIVAALCMMFLFGMELNNYLTVSTTTSVIVDKSSDAEFLRI
DFNMSFPALSCEFASVDVSDVLGTNRLNITKTVRKHSIDKNLRPTGSEFHSGSTATLKHDAEDDEEYEGEG
SVSLNGHSFDRVTHHFPILVVNFFAPWCYWSNRLKPSWEKAANI IRERYDRES DGRILVAKVDCTEEVDLC
RRNHIQGYPSIRIFRKGTDVRRDDHGHDHESYGGDRDTSLVKMMEDLVAPIKLDSTITSDNSSTKLETG
LKRPAVPTGGCRIEGFVRVKKVPGNLVISARSAHSFDASQMNMSHVISSFSFGKTI TPKVMSDIKILLPH
LGRSHDRLNGNSYVTNPRDSTENVTIEHFLQVVKTEVMTRS YKLVVEEYETAHSSLVHSLHIPVAKFH YEP
SPMQVLITENPKSFSHFLTINVCAI IGGVFTVAGILDSILHNTMRMVKKVELGKNF

NCBI Reference Sequence: XP_002977139.1

>S.moellendorffiiERV-A
MQMLKKLQQLDAYPKINEDFHSRTLSSGGVITVVSSIFMAILFITELKLFLLPGTTSELLVDTSRGETLQIN
FDITFPALACSVISLDAMDVSQEHLVDVKNHIFKKRLDPGKVVQPPVQEDIGGPKIDKPLQKHGGRLEHN
ETYCGSCFGAEQSDDECCNSCEEVREAYRKRGWAIHNADLDQCKREGWLT KIKEEEGEGCNIYGSLEVNK
VAGNFHFAPGKSFQQHVHVHDVQSLHKEKFNVSHYINELSFGARFPGVVNPLDKEKRIQKFP SAMYQYFI
KVVPTAYTDMTGHKIVTNQFSVTDHFKAVEGLNGRSLPGVFFFYELSPIKVLFTERKTSFLHFLTINVCAII
GGVFTVSGIIDSFIYHGHRAIKKKMEIGKYI

NCBI Reference Sequence: XP_002993277.1

>S.moellendorffiiERV-B
MGLKMKNNINAFHADEHLLTQKTVSGAILTIVGVSIIILVLFAYEFK FYLSTNVVHQMSVDTTTRGQNLPIHIN
ITFPSLPCQILSDVAIDMSGKHEVDLDTNIWKLRLHKDGHILGSEYLSDLVEKEHAHDNLTGIFHSHEELR
SAVKVVNEINKALQDGEGRVFGVLDVERVAGNFHISMHGMSLQVARQIFHSVKEVNVSHIINDLSFGPKY
PGIHNPLDRTVRILRDTAGTFKYFIKIVPTEYRYLNGGKLP TNQFSVGEYLLAARDDDISWPAVYFLYDLS
PITVLIKEERRSFGHLLTRFCAIVGGTFSLTGMLDRWIYRLVESITRAKGVLI

NCBI Reference Sequence: XP_002982011.1

>S.moellendorffiiPDI-C
MTTASKIKSIDFYRKIPRDLTEASLSGAGLSLIAAFAMIFLFGMELNNYLTVSSTTNVVVDRSKDGEYLRI
QFNMSFPALSCEFASVDVSDALGTNRYNLTKTVRKYPIDPNLKIVGPEFHPGPIPNPTSHGDDHEGEGAH
VLTSSTFDEYARRYSVLVNFYAPWCIWSARLKPSWDKAAGIIAEKYHPDTGRILLGKVDCDNDLCKRH
HIQGFPSIRIFHKGHDLKDEHGHHEHDSYYGERDTSLSVKAMEALVPKETTLLALEDKTNGTVKRPAPRAGG
CRIEGFIRAKK[VPGNIIISAHSGSHSFDASAMNMTHYVSQFTFGRELNFWMRRELYRIYPHLASVYDTVE
ANLTGRIYVSQHENITHDHYLQVVKTEVVSRLKRKEFSLLEQYDYTSHSNTIQNTNVPVAKFHYESLSPMQV
LVKENPKSFSHFITNVCAIIGGVFTVAGIVDSMLHGAMRMVKKIELGKQF

NCBI Reference Sequence: XP_006354000.1

>S.tuberosumERV-A1
MDSFISKIRSLDAYPKINEDFYRSLSGGVITLASSIIMTLLFISELRLYLHAATETKLIVDTSRGETLRI
NFDITFPAIPCSILSVDAMDISGEQHLDIRHDIKKRIDVLGNVIETRKEGIGSPTIDRPLQRHGGRLEHN
ETYCGSCYGSEGSDDHCNCTCEDVREAYRKKGWALTNPDEIDQCKREGFLEKIKEEEGEGCNMYGFLEVNK
VAGNFHFAPGKSFQQSNVHVHDLTLFQKDSYNISHKINRLTYGEYFPGVVNPLDGMWWTQETPHGMYQYFI
KVVPTVYTDVSGHTIQSNQFSVTEHFQGADGFRFQSI PGVFFFYDLSP IKVTFTEQHVSFLHFLT NVCAI V
GGVFTVSGILDSFIYHGQKAIKKK MELGKFS

NCBI Reference Sequence: XP_006351793.1

>S.tuberosumERV-A2
MERVFSKLRNLDAYPKINEDFYRSLSGGIITLVASIIIMLVLFVNELGLYIHSYTETQLVVDTSRGGKLHI
HFDITFPAVPCSLLSLDARDISGEEHFDIRHDIKFKRIDSHGAVIEVRQDGIGAPKIEKPLQRHGGRLEHN
ETYCGSCFGAETADDECCNSCEEVREAYRKRGMWALTNPDLIDQCKREGFVQKIKDEEGEGCNIHGSLEVNK
VAGNFHFAAGKSFHQSTFQLFELISLQSDTYNISHRVNKLAFGDSIPGVVNPLDGVQWTQEAQNGMYQYFI
KVVPTIYKGVGRGTIDSNQFSVTEHFQGS DLGLFQSITGVYFFYDLSP IKVTFTEEHVSFFHFLT NVCAI I
GGVFTVAGILDACIYHSQKAIKKKVELGKFG

Phytozome *Solanum tuberosum* v3.4 proteome: PGSC0003DMT400002424

>S.tuberosumERV-B1
MGVKQVLRAMDAFPRAEEHLLQKTKSGAFVSI VGLVIMSTLFLHEL SYLLNTITVHQMAVDLRRGETLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNSDGHITGTEYLSDLVEKEKHDDSDNKTHMQGF
DQDAENLIKKVKQALAHGEGCRVYGVLDVQVRVAGNFHISVHGLNIFVAQMI FGGTTHVNVSHI IHDL SFGP
KYPGSHNPLDGTERRILRGASGTFKYIYIKIVPTEYRYSKEVLPNTNQSFSVSEYFSPINEFDRTPAVYFLYD
LSPITVTIREERRNFLHFITRLCAVLGGTFALTGMLDKWMMFRFLEAVMKKDSRGLVR

NCBI Reference Sequence: XP_006351995.1

>S.tuberosumERV-B2
MGVKQALRAIDAFPRAEHLLQKTKFGAFVSI VGLLIMVTLFLHEL SYLLNIYTVHQMSVDSRRGENLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNSDGHITGTEYLSDLVEKEHEVHKHDAHKEHHED
SDKIHLQGIDEE SQNMIKKVKQALADGEGCRVYGILDVQVRVAGNFHLSVHGMNIFVAQMI FEKSTHVNVS
IIHDL SFGPKYPGIHNPLDGTSRILRGSSGTFKYIYIKVVPTEYRYISKEVSPNTNQSFSVTEYFSP IHD
FERT WPAVYFLYDLSPITVTIREERSFLHFITRLCAVLGGTFALTGMLDGWMYKILESFTKKN SRTIVR

NCBI Reference Sequence: XP_006366039.1

>S.tuberosumPDI-C
MVSTSKIKSVDFYRKIPRDLTEASLSGAGLSIVAALSMMFLFGMELNNYLTVSSTTSVVVDKSSDAEFLRI
DFNMSFPALSCEFASVDVSDVLGTNRLNITKTVRKHSIDKNLRPTGSEFHS GSTATELKHDAEDDEEYEGEG
SVSLNGHSFDRVTHHYPILVNFYAPWCIWSTRLKPSWEKAANI IRERYDRES DGRILVAKVDC TEEVDLC
RRNHIQGYPSIRIFRKGSDVRDDHGHHDHESYGDRTDSLVMMEDLVAPIKLD SQMISSDNSSTKLETG
LKRPAVPTGGCRIEGFVRVKKVPGNLVISARSAHSFDASQMNMSHVISSFSFGKTI TPKVMSDIKILLPH
LGRSHDRLNGNSYVTNPRDSTENVTIEHFLQVVKTEVMTRSYKLVVEEYETAHSSLVHSLHIPVVKFH YEP
SPMQVLITENPKSFSHFITNVCAIIGGVFTVAGILDSILHNTMRMVKKVELGKNF

NCBI Reference Sequence: XP_007018816.1

>T.cacaoERV-A1

MDGIMNKLRLNDAYPKINEDFYSTRLSGGVITLVSSVVMFFLFFSELRLYLHAVTETKLVVDTSRGETLRI
NFDVTFPALACSI LSLDAMDISGEQHLDRHDI IKKRLDAHGNVIESRQDGIGAPKIEKPLQRHGGRLLEHN
ETYCGSCYGAEASDDDDCCNSCEDVREAYRKKGWALSNPDLVDQCKREGFLQKIKDEEGEGGCNIYGFLEVNK
VAGNFHFAPGKSFQQSNVHVHDL LAFQKDSFNISHKINRLAFGDYFPGVVNPLDGVHWTQE QPSGMYQYFI
KVVPTVYTDVSGHTIQSNQFSVTEHFKGAEINRLQSLPGVFFFYDLSPIKVTTFTEQHVSFLHFLTIVCAIV
GGVFTVSGILDSFIYHGQRAIKKKIEIGKYS

NCBI Reference Sequence: XP_007042992.1

>T.cacaoERV-A2

MENVFNKLRLNDAYPKVNEDEFYSTRLSGGIITLVSSLAIFFLFFSEFRLYLHTVTETKLLVDTSRGEALRI
NFDVTFPAIPCTLLNLDAMDISGEQHLDIKHDI IKKRINAHGDVIESRQDGIGAPKIEKPLQRHGGRLLEHN
ETYCGSCFGEAQSDDDCCNSCEEVREAYRRKGWAMTNVDLIDQCKREGFIQRVKDEDEGEGCNIHGSLEVNK
VAGNFHFAPGKSFHQTNIFLSDLLAFQKDSYNI SHRINRLAFGEYFPGVVNPLDGAQWIHETSNGMYQYFI
KVVPTIYTDIRGRTVHSNQYSVTQHFNLEVIYPNSHPGVFFIYDFSPIKVTFKEEHISFLHFITNICAVI
GGIFTVAGIIDSFVYHGQRRMKKKMEIGKFR

NCBI Reference Sequence: XP_007048888.1

>T.cacaoERV-B

MGVKQALKSLDAFPRAEEHLLQKTQSGALVSIVGLVIMAALFFHELTYLTTYTVHQMSVDLKRGETLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNLSLQIVGTEYLSDLVEKEHAHKKHDDKEKHDD
SDKKLHALGFDQEAENMIKKVKQALANGEGCRVYGVLDVQRVAGNFHISVHGLNIYVAQMI FGGATHVNV
HMIHDL SFGPKYPGLHNPLDGTVRILHDTSGTFKYIKIVPTEYRYSKEVLP TNQFSVSEYFSPMHEFDR
TWPVAVFLYDLSPIITVTIKEERRSFLHFITRLCAVLGGTFALTGMLDRWMMFRLIEGLTKPSHKGVLR

NCBI Reference Sequence: XP_007021017.1

>T.cacaoPDI-C

MISSSKIKSVDYRKYIPRDLTEASLSGAGLSIVAALAMMFLFGMELSNYLTVSTSTSVIVDKSSDGEFLRI
DFNISFPALSCFEFASVDVSDVLGTNRLNITKTIRKFSIDPHLRSTGAEFHAGPVPHF IKHGDEVEDEETVEG
RVPLNGVDFKLSHLYPILVVNFYAPWCYWSNRLKPSWEKAAKI IKERYDPEMDGRILLAKVDCTEEVDLC
SRHVIQGYPSIRIFRKGSDLREDHGHHDHESYYGDRDTESLVKTMEELVAPI PLESQKLALEDKSNITKRP
APKTGGCRIEGYVRVKKVPGNLIISARSAHSHFDASQMNMSHVISHL SFGKTI SPRVLSVKRLIPYIGRS
HDRLNGRSFINHRELDANVTIEHYLQIVKTEVVTRRSREHTLIEEYETAHSSLAQSIYIPVTKFHFELS
PMQVLITENPKSFSHFITNVCAIIGGVFTVAGILDSILHNTIRLMKKVELGKNF

NCBI Reference Sequence: XP_002285801.1

>V.viniferaERV-A1

MDNIINKLRLNDAYPKINEDFYSTRLSGGVITLASSIFMLLLFISELRLYLHAVTETKLVVDTSRGETLRI
NFDVTFPALPCSI LSLDAMDISGEQHLDRHDI IKKRIDAHSVIEARQDGIGSPKIEKPLQKHGGRLLEHN
ETYCGSCYGAEASDDDDCCNCEEVREAYRKKGWAMSNPDLIDQCKREGFLQRIKDEEGEGGCNIYGFLEVNK
VAGNFHFAPGKSFQQSNIVHDL LAFQKDSFNISHKINRLAFGDYFPGVVNPLDGVQWIQATPSGMYQYFI
KVVPTVYTHVSGHTISTNQFSVTEHFRNAELGRLQSLPGVFFFYDLSPIKVTTFTEEHVSFLHFLTIVCAIV
GGVFTVSGILDSFIYHSQKAIAIKKKIEIGKFS

NCBI Reference Sequence: XP_002264644.1

>V.viniferaERV-A2

MDRVFQRLRLNDAYPKINEDFYSTRFSGGLITLISSIVMLFFLFFSELRLYLHTVTETKLVVDTSRGGTLRI
NFDVTFPAVPCSVLTLAMDISGEQHHDIKHDIVKKRIDAHGNVAVRQDGIGGPQIEKPLQRHGGRLLEHN
EKYCGSCYGAEVTD DDDCCNSCDEVREAYRKKGWGMTNPDLIDQCKREGFVQKVKEEGEGC NVYGFLEVNK
VAGNFHFSPGKGFYQSNIVNDLLAISKDGYNISHRINKLAFGDHFPVVNPLDGAQWFQDAPDGM YQYFI
KVVPTIYTDIRGHTIQSNQFSVTEHFRSAEPGRPHSLPGVFFFYDLSPIKVTSKEEHSSFLHFMTNICAVI
GGIFTVSGIIDSFVYHGHRRAIKKKMELGKFS

NCBI Reference Sequence: XP_010656946.1

>V.viniferaERV-B

MGVKQFIKSLHAFRAEEHLLQKTQSGAVVSIIGLVIMATLFLHELRYLTTYTVHQMSVDLKRGETLPIH
INMTFPSLPCDVLSDVAIDMSGKHEVDLDTNIWKLRLNRDGFIIIGTEYLSDLVEKEHADHKKHDKHNDHHDG
SDQKLHAHSFDQDAENMVKKVKQALANGEGCRVYGVLDVQRVAGNFHISVHGLNIFVAQMI FGDGAIHNVNS

HI IHDLSFGPKYPGLHNPLDGTVRILRGASGTFKYYIKIVPTEYRYISKEVLPTNQFSVMEYFSPMNEFDR
TWPAVYFLYDLSPVTVTIKEERRSFLHFITRLCAVLGGTFALTGMLDRWMYRFLEMLTKPNAKSVYR

NCBI Reference Sequence: XP_002281649.1

>V.viniferaPDI-C

MVSTSKIKSVDLYRKIPRDLTEASLSGAGLSVIAAALSMMFLFGMELSNYLSVSTSTSVIVDQSSDGDFLRI
EFNISFPALSCEFASVDVSDVLGTNRLNITKTIRKYSIDPDLRPTGAEFHSGPVGKVIKHGDETDDEEYSEG
SASLTAQNFKYKSHQHAILVVNFFAPWCYWSTRLKPSWEKAAKIIRERYDPELDGRIVMAKVDCTEEGELC
RRHHIQGYPSIRIFRKGSDVRDDHGHHDHESYYGDRDRTLVTMETLVAPIPLESQRLALENKSDSTADH
IKRPAPRTGGCRIEGFVRVKKVPGNLVISARSGSHSFDPSQMNMSHVISHLFGRKIAPRVMSDMKRVLPY
IGGSHDRLNRSYISHPSDSNANVTIEHYLQVVKTEVITTRDHKLVEEYETAHSSLVQSLYIPVAKFHFE
LSPMQVLVTENRKSFWHFITNVCAIIGGVFTVAGILDSVLHNTMRLMKKIELGKNF

NCBI Reference Sequence: NP_001148795.1

>Z.maysERV-A1

MDGLLSKLRSLDAYPKVNEDFYSTRLSGGIITLVSSAVMLLLFVSELRLYLHAVTETTLRVDTSRGETLRI
NFDVTFPALQCSIIISLDAMDISGQEHLDVKHDVFKQRIDAHGNVIATRQDVVGGMKMEAPLQHHGGRLEHN
ETYCGSCYGAQESDDQCCNTCEDVREAYRKKKGWVSNPDLDDQCKREGFLQSIKDEEGEGCNIYGFIEVVK
VAGNFHFAPGKSFQQSNVHVHDLFPQKDSFNVSHKINRLSFGGEYFPGVVNPLDGANVWQHSSYGMYYQYFI
KVVPTVYTDINEHIILSNQFSVTEHFRSGESGRMQALPGVFFFYDLSPIKVTFTQHVSVFLHFLTNVCAIV
GGVFTVSGIIDSFYVYHSQRAIKKKMEIGKFN

NCBI Reference Sequence: NP_001141198.1

>Z.maysERV-A2

MDAFLQRLKRLDAYPKVNEDFYKRTLSSGGIVTLVAAVVMMLLLFISETRSYFYSATETKLVVDTSRGERLRV
NFDITFLSIPCTLLSVDTTDISGEQHDIRHDIEKIRLDAHGNVIEARKVSIKAKIERPLQKHGGRLDKG
EQYCGTCYGAEESEDEQCCNSCEEVREAYKKGWALTNPDLDQCAREDFVERVKTQQDEGCNVHGFLDVSK
VAGNFHFAPGKGFYESNIDVPELSLLEGGFNITHKINKLSFGTEFPGVVNPLDGAQWTQPASDGTYYQYFIK
VVPTIYTDIRGHNIHSNQFSVTEHFRDGNVRPKPQPGVFFFYDFSPIKVIIFTEESRSLHLHYLTNLCAIVGG
VFTVSGIIDSFIYHGQKALKKKMELGKYR

NCBI Reference Sequence: NP_001132255.1

>Z.maysERV-A3

MDAFLHRLKRLDAYPKVNEDFYKRTLSSGGIVTLVAAVVMMLLLFISETRSYFYSSTETKLVVDTSRGERLRV
NFDITFSPSIPCTLLSVDTTDISGEQHDIRHDIEKRLNSHGNVIEARKEGIGGAKVERPLQKHGGRLDKG
EQYCGTCYGAEESEDEQCCNSCEEVREAYKKGWALTNPDLDQCAREDFIDRVKTQQDEGCNVLGFLDVSK
VAGNFHFAPGKGFYESNIDVPELSLLEGGFNISHKINKLSFGTEFPGVVNPLDGAQWTQPASDGTYYQYFIK
VVPTIYTDIRGRGIHSNQFSVTEHFRDGNVRPKSQPGVFFFYDFSPIKVIIFTEENRSLHLHYLTNLCAIVGG
VFTVSGIIDSFIYHGQKALKKKMELGKYR

NCBI Reference Sequence: XP_008654279.1

>Z.maysERV-B

MARIPSLKSLNAFPHAEHLLKKTYSGAVVTIFGLLIMITLFFVHELQFYLTTTYTVHQMSVDLKRGETLPIH
INMSFPPLPCEVLSVDAIDMSGKHEVDLHTNIWKLRLDKYGHIIIGTEYLSDLVEKGGHGAHHDHDDHDDHDD
EQKKHEQTFNEEAEMIKSVKQALNGEGCRVYGMLDVQRVAGNFHISVHGLNIFVAEKIFEGSNHVNVSH
VIHELDFGPKYPGIHNPLDETSRILHDTSGTFKYYIKVVPTEYKYLSKKVLPTNQFSVTEYFLPIRPTDRA
WPAVYFLYDLSPITVTIKEERNFLHFVTRLCAVLGGTFAMTGMLDRWMYQLIKTVTNSKTRSVLR

NCBI Reference Sequence: NP_001105762.1

>Z.maysPDI-C

MISSKLSKSVDFYRKIPRDLTEASLSGAGLSIVAALAMVFLFGMELSSYLAVNTTTTSVIVDRSSDGEFLRI
DFNMSFPALSCEFASVDVSDVLGTNRLNITKTVRKYSIDRNLVPTGSEFHPGPIPIPNKHGDDVEEDHVDG
AFSLSSRNFDSPSHQYPVLVVNFYAPWCYWSNRLKPSWEKTAKIMRERYDPEMDGRILLGKVDCTEEVELC
RRNHIQGYPSIRVFRKGSDIKENQGHHDHESYYGERDTESLVAAMETYVANIPEKAHALEDKSNKTVDPK
RPAPMASGRIEGFVRVKKVPGSVVISARSGSHSFDPSQINVSHYVTQFSFGKRLSPRMLHEFIRLTPYLR
GYHDLRAGQSYTVKHGEVNNANVTIEHYLQVVKTELVTQRSSKELKVLVEEYETAHSSLVHSFYVPPVVKFHF
EPSPMQVLVTEVPKSFHSFITNVCAIIGGVFTVAGILDSIFHNTLRMVKKIELGKNI

Phytozome *Chlamydomonas reinhardtii* v5.5 proteome: Cre13.g579850.t2.1

>C.reinhardtiiERV-A

MSGGGFLGKALKALDAYPKINEDFFTKTMSGGIIITIVSSVVMVLLFLSELRLFLTTSSAHELSDVDVGRGEKI
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Phytozome *Chlamydomonas reinhardtii* v5.5 proteome: Cre08.g358579.t1.1

>C.reinhardtiiERV-B

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VNIQEAMQHLVDMEDEADHHEGCHVYGTMEVKRVAGRLHLSVHQNMVFMQLPQLLGTTHHHPKILNMSHVIK
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NCBI Reference Sequence: XP_001699770.1

>C.reinhardtiiPDI-C

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DIDITVPLSHENFEATLARYPIAVINFYAPWCHWCQRLEPTWEAATKEVHDKYPEWDGRVRFKAVDCTAEV
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PGCNLAGFVMVKKVPGTVHFVARSEGH SFDHTWMMNTHMHSFHVGT RPSRKYQQLKRLHPAGLTADWAD
KLHDQLFVSEHTQSTHEHYLQVVLTTIEPRHSRHTGN YDAYEYTAHSHSYQSDSIP SARFTYDLSPIQILV
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NCBI Reference Sequence: XP_005650551.1

>C.subellipsoideaERV-A

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HFAPGKSFQQGPMHVHDLVPPFQGVTFDLSHRIDKLSFGHEYPGMTNPLDRVNLPKFNTRNPQGLPGAYQYF
LKVVPTIYVNSHNHTINSNQYSVTEHFKGSQDFQAQLPGVFFFYDLSPIKVKYHETRMSFLHFLT SVCAIV
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NCBI Reference Sequence: XP_005651581.1

>C.subellipsoideaERV-B

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DGAERILDKESGTFKYFLKVVPT EY VKLDGTRTTTNQYSVTEYD TVVHKGEMQMPSVWFSYDISPISVTIS
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NCBI Reference Sequence: XP_005642637.1

>C.subellipsoideaPDI-C

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HQITGFPSIRVFRSGHDEVNVHGVEHESYRGDR TQASLLAFADNLAPSAGQPHHYIRGVTRMAK TSGCAL
SGFVLVKKVPGALHFLAKSPGHSFDYQAMNMSHV VNYLYFGNKPSPRRHQSLAKLHPAGLSDDWADKLAGQ
DFFSRAAKATFEHYMQVVLTTIEPSKRP ELSYDAYEYTVHSHTYDTADIPAAKFTYDLSPIQILVSEKRR
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NCBI Reference Sequence: XP_002948747.1

>V.carteriERV-A

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VNVK VAGNFHFAPGRSYQQGSMHVHDIAPFGDAVIDFRHTVNKLSFGAPYPGMKNPLDNAKAGYKSAAATGM
YQYFLKVVPTS YTGIDNKTLATNQFSVTENFRESSQGGAGKTLPGVFFFYDLSP IKVRIVEHSSSFLSFLT
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NCBI Reference Sequence: XP_002958233.1

>V.carteriERV-B

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GFGPHYPGQLNPLDGYVRMVKGPPQSFKYFLKVVPT EYYNRLGRVTETHQYSVTEYTQPLEPGYVPTLDVH
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Phytozome *Volvox carteri* v2.0 proteome: Vocar20014205m

>V.carteriPDI-C

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QETARP WYQFLTTSCAIIGGVFTVAGILDALLYQSFKVVKKLNLGKQG