

Supplemental Dataset 1

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P_trichocarpa_XP_002324639 -----
P_trichocarpa_XP_002309635 -----
P_trichocarpa_XP_002300855 -----
P_trichocarpa_XP_002307573 -----
O_sativa_Os02g0141100_NP_001045857 -----
O_sativa_Os02g0805100_NP_001048437 -----
O_sativa_Os06g0166500_NP_001056915 -----
A_lyrata_XP_002864517 -----
P_trichocarpa_XP_002324470 -----
O_sativa_Os04g0653300_NP_001054106 -----
A_lyrata_XP_002878437 -----
aAtIAA33_At5g57420 -----
aAtIAA30_At3g62100 -----
A_lyrata_XP_002880275 -----
aAtIAA20_At2g46990 -----
P_trichocarpa_XP_002302809 -----
P_trichocarpa_XP_002320253 -----
O_sativa_Os01g0286900_NP_001042778 -----
O_sativa_Os02g0723400_NP_001047972 -----
A_lyrata_XP_002885218 -----
aAtIAA31_At3g17600 -----
O_sativa_Os11g0221300_NP_001067526 -----
A_lyrata_XP_002875064 -----
aAtIAA32_MEE10_At2g01200 -----
aAtIAA34_At1g15050 -----MYC
A_lyrata_XP_002892847 -----
P_trichocarpa_XP_002314837 -----
A_lyrata_XP_002869489 -----
aAtIAA11_At4g28640 -----
P_trichocarpa_XP_002303110 -----
O_sativa_Os02g0817600_NP_001048522 -----
A_lyrata_XP_002889491 -----
aAtIAA10_At1g04100 -----
A_lyrata_XP_002881274 -----
aAtIAA13_At2g33310 -----
A_lyrata_XP_002889513 -----
aAtIAA12_BDL_At1g04550 -----
P_trichocarpa_XP_002311698 -----
P_trichocarpa_XP_002314509 -----
A_lyrata_XP_002885143 -----
aAtIAA26_At3g16500 -----
A_lyrata_XP_002891672 -----
aAtIAA18_At1g51950 -----
O_sativa_Os02g0228900_NP_001046357 -----M
P_trichocarpa_XP_002309532 -----
P_trichocarpa_XP_002324753 -----
P_trichocarpa_XP_002303315 -----
O_sativa_Os01g0741900_NP_001044208 -----M
O_sativa_Os05g0523300_NP_001056086 -----M
O_sativa_Os01g0190300_NP_001042263 -----
A_lyrata_XP_002872184 -----
aAtIAA28_At5g25890 -----
O_sativa_Os08g0109400_NP_001060811 -----
P_patens_IAA1A_BAB71765 -----MNVS-EGCSTLTGAQLKYSTDKSNMSYETVYRDAAVE
P_patens_IAA1B_BAB71766 -----MKFSNEVVHKSMNIT-EDCSALTGALLKYSTDKSNMNFETLYRDAAVE
P_patens_XP_001765051 -----MKFSGEGSSVLTGAQLKYSSDKPNMNFETVCKDAHAE
A_lyrata_XP_002882951 -----
aAtIAA19_MSG2_At3g15540 -----
A_lyrata_XP_002894404 -----
aAtIAA6_SHY1_At1g52830 -----
P_trichocarpa_XP_002299626 -----
P_trichocarpa_XP_002304179 -----
A_lyrata_XP_002892874 -----
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aAtIAA33_At5g57420	-----MNSFEPQSQDSLQR-----RFH-----
aAtIAA30_At3g62100	-----MGRGR-----
A_lyrata_XP_002880275	-----MGRGR-----
aAtIAA20_At2g46990	-----MGRGR-----
P_trichocarpa_XP_002302809	-----MGRGAA-----
P_trichocarpa_XP_002320253	-----MGRGAT-----
O_sativa_Os01g0286900_NP_001042778	-----MECMASTEESLPASSSMDS CSGELPT-----
O_sativa_Os02g0723400_NP_001047972	-----MEV-----
A_lyrata_XP_002885218	-----MEV-----
aAtIAA31_At3g17600	-----MDPNT-----
O_sativa_Os11g0221300_NP_001067526	-----MDPNT-----
A_lyrata_XP_002875064	SDPPHPLHLVASDKQKQDKHLILSWKKPTMDS
aAtIAA32_MEE10_At2g01200	-----MDS-----
aAtIAA34_At1g15050	-----MDSN-----
A_lyrata_XP_002892847	-----MEG-----GSASG-----SASALSND-----
P_trichocarpa_XP_002314837	-----MEG-----GSASG-----SASALSND-----
A_lyrata_XP_002869489	-----MQGGF-----LGGGSGGSVCMSTVSME-----
aAtIAA11_At4g28640	-----MRG-----GVAG-----PTAGEPPGT-----
P_trichocarpa_XP_002303110	-----MNG-----LQDVCS SSGSVMI GLPAEED-----
O_sativa_Os02g0817600_NP_001048522	-----MNG-----LQEVCS SSGSVMI GLPAEED-----
A_lyrata_XP_002889491	-----MGK-----
aAtIAA10_At1g04100	-----MI TELEM GK-----
A_lyrata_XP_002881274	-----MR-----
aAtIAA13_At2g33310	-----MR-----
A_lyrata_XP_002889513	-----MS-----
aAtIAA12_BDL_At1g04550	-----MEGCLGLLGGGGSSGASTNKSTLS-----
P_trichocarpa_XP_002311698	MEG---NREMGPKLLD-LIPQGRK-WYQEDKN---
P_trichocarpa_XP_002314509	MEGCPRNREIGPKLLD-LIPQGRK-WYQEDKN---
A_lyrata_XP_002885143	MEGYSRNGEISP KLLDLMI PQERRNWIHDEKNSV---
aAtIAA26_At3g16500	MEGYSRNGEISP KLLDLMI PQERRNWFHDEKNSV---
A_lyrata_XP_002891672	GEASESMKKISRGRLLGGSWMPGPSDHHRHGDE---
aAtIAA18_At1g51950	-----MTSEKEE-WHKS---H-----
O_sativa_Os02g0228900_NP_001046357	MEGCSKNVEACPQLLD-LIPKERE-WLKGEDER---
P_trichocarpa_XP_002309532	EEGSKNREGLPPQLLD-LIPDEKEWKLREALGLGR---
P_trichocarpa_XP_002324753	EEEFKDK-GLPPTLLH-LIPDGREWVKVEADGEG---
P_trichocarpa_XP_002303315	-----MAWRRG---FGREEEDA-----
O_sativa_Os01g0741900_NP_001044208	-----MKSSSVAPRLKQERQDDCKFQEGD-----
O_sativa_Os05g0523300_NP_001056086	SPQREVSNEGSSTLKEHDYFGLSEVLSSNSSSGKQPEK---
O_sativa_Os01g0190300_NP_001042263	SPQHEVSNEGSSTLKEHDYFGLSEVSSNSSSGKQPEK---
A_lyrata_XP_002872184	SSQHEESSESSTLKEHDYFGLSEVSSNSSSGDKQPEKG---
aAtIAA28_At5g25890	-----ME-----KEG-----
O_sativa_Os08g0109400_NP_001060811	-----ME-----KEG-----
P_patens_IAA1A_BAB71765	-----MA-----KEG-----
P_patens_IAA1B_BAB71766	-----MA-----KEG-----
P_patens_XP_001765051	-----MA-----KEG-----
A_lyrata_XP_002882951	-----MA-----QP-----
aAtIAA19_MSG2_At3g15540	-----MA-----QP-----
A_lyrata_XP_002894404	-----MA-----NESD-----
aAtIAA6_SHY1_At1g52830	-----MA-----NESN-----
P_trichocarpa_XP_002299626	-----MSSEEYVRVW-----P-----DSG-----
P_trichocarpa_XP_002304179	-----MSPEEYVRVW-----P-----DSG-----
A_lyrata_XP_002892874	-----MSPENGSNLL-----E---S---DAAN-----
aAtIAA5_At1g15580	-----MSVETERSST-----E---SSA---ASG-----
A_lyrata_XP_002887832	-----MSVETERSST-----E---SSA---ASG-----
aAtIAA15_At1g80390	-----MSTSSGADS-----SPP---VSG-----
P_trichocarpa_XP_002299625	-----MEAAVGY-----A-----ADS-----
O_sativa_Os01g0178500_NP_001042192	-----MEN-----
O_sativa_Os05g0178600_NP_001054800	-----MA-----M-----AAE-----
O_sativa_Os06g0597000_NP_001057986	-----MASSSSLRSTSCLA-----SAA-----
O_sativa_Os03g0633800_NP_001050714	-----MERS-----MA-----YER-----
O_sativa_Os12g0601400_NP_001067210	-----MA-----MA-----YES-----
O_sativa_Os03g0797800_NP_001051565	-----ME-----FER-----
O_sativa_Os07g0182400_NP_001059051	-----MEG-----ME-----FER-----
P_trichocarpa_XP_002300804	-----MEGG-----VA-----YEN-----
P_trichocarpa_XP_002307625	-----MEGG-----VA-----YEN-----
P_trichocarpa_XP_002319642	-----ME-----VIN-----
P_trichocarpa_XP_002328339	-----ME-----VTN-----
P_trichocarpa_XP_002312567	-----MA-----YE-----KVN-----
P_trichocarpa_XP_002314656	-----MA-----YE-----KVN-----
A_lyrata_XP_002870306	-----MA-----YE-----KVN-----
aAtIAA1_AXR5_At4g14560	-----MA-----YE-----KVN-----
A_lyrata_XP_002885542	-----MA-----YE-----KVN-----
aAtIAA2_At3g23030	-----MA-----YE-----KVN-----

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aAtIAA4_At5g43700
A_lyrata_XP_002892202
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A_lyrata_XP_002864971
O_sativa_Os090527700_NP_001063732
A_lyrata_XP_002868277
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P_trichocarpa_XP_002306817
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O_sativa_Os06g0335500_NP_001057554
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P_trichocarpa_XP_002303297
P_trichocarpa_XP_002331172
A_lyrata_XP_002867425
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aAtIAA8_At2g22670
aAtIAA9_At5g65670
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A_lyrata_XP_002862301
P_trichocarpa_XP_002302351

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A_lyrata_XP_002878437
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A_lyrata_XP_002869489
aAtIAA11_At4g28640
P_trichocarpa_XP_002303110
O_sativa_Os02g0817600_NP_001048522

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-----MEKV-----DV-----YDE-----
-----MDE-----
-----MDE-----
AKPVHEFSGHNDNGVSDIAFSSDARFLASASDD-----
-----MASYGDD-----

-----MIG-----QL-----
-----MIG-----QL-----
-----MTTSVLGTE-----RTD-----
-----MIG-----SVE-----
-----MMG-----SVE-----
-----M-----
-----M-----
-----MEVE-----KGTK-----
-----MTSIMGAETA-----D-----TYSM-----
-----MTSIMGAE-----P-----E-----KYSM-----
-----MEVE-----KGTK-----
-----MAG-----
-----MAAD-----
-----MAG-----
-----DYIGLSA-----AAASP-----TPS-----SSSCSSSPNPG
-----DYIGL-----AASP-----ASS-----SSSCCAS-TPV
-----DYIGLS-----PPP-----PPS-----SSSAAARADD
-----DYIGLS-----PAA-----AAA-----
-----DYIGLS-----ETPSMENISEKLSSTSSSTLSTEEKNNSSSSNSNNNNKNN
-----DYIGLS-----ETPSMEKISDKLSSS-----SS-TLSTEENIN-----SNSNSNSNSTN
-----DYIGISS-----EVSSMEN-----TSG-----TDTINISTAS
-----DYIGLS-----EFPTME-----E-----ATT-----MSDKTKTRDNN
-----DYIGLS-----EFPTM-----E-----ATT-----MSDKTKTRDNN
SPCLKERNYLGLS-----DCSSVD-----SST-----IPNVVG-----K
-----GLKEHNYLGLS-----DCSSVG-----SST-----LSPLAEE-----DDK
-----GLKEHNYLGLS-----DCSSVG-----SST-----LSSLAE-----DDK
-----PGLKERNYLGLS-----DCSSVD-----SST-----IPNVE-----K
-----GLKEHNYLGLS-----DCSSVG-----SST-----LSSLAE-----DDK
-----ELKERNYMGLS-----DCSSVD-----SSA-----VSAASD-----ERK

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--F---DL---NKHC-----AI-----EGAASC---L-----
GQL---HL---GSYS-----WF-----STNDN-----
GQL---QL---GQYS-----WF-----STNAN-----
-DQ---ML---GSKP-----WI-----SCEDGN---Y-----
-----MP-----FTASTF-----
-----DPLS-----MP-----FAASTF-----
-----LCPSRTDGLVH-----QG-----FPSSNFNQHMFKDALPD-----
-----GS---GSAP-----VS-----ASSAG-----
-----SELD-----LL-----NSAPG-----
--Q---D---NTTT-----HQ-----PR-----
-----MSQY-----TR-----PT-----
--Q---Q---DTKR-----RL-----PA-----
--SS---SSSS-----IE-----SSCKS-----
--Q---D---NSTT-----QQ-----PR-----
--SS---SSSS-----IE-----SSCKS-----
--SS---SSSS-----IE-----SSSKS-----
--SS---SSSS-----FE-----SSRYP-----
--SS---SSSS-----FE-----SSNYP-----

-----TT---TTAP-----AQ-----STASSG-----
-----SN---SCSS-----FS-----SSSVDS-----
-----SN---SCSS-----FS-----SSSVDS-----

-----TADFFQGSKFKH-----TY-----YSQTKKG-----
-----PADFFKGSKFKH-----TY-----YSQTKKG-----
-----PLGVFPNSPKYH-----PY-----YSQTEF-----
-----QHGVFPSSPKYH-----PY-----YPQNTTEC-----
-----ASGFLLNPPALH-----ST-----YYQFPRED-----
-----EN---LVVS-----CE-----DSSSP-----
-----EN---LVVS-----CE-----DSSSP-----
-----DN---VLMS-----SE-----DSSSP-----
-----EA---EAEE-----VE-----ESSAG-----

A_lyrata_XP_002889491	-----EN---AALS-----SE-----DSSRPDES--V-----
aAtIAA10_At1g04100	-----EN---AAHS-----SE-----DSSCPDES--V-----
A_lyrata_XP_002881274	-----GE---SELE-----LG-----LG-LS-----
aAtIAA13_At2g33310	-----GE---SELE-----LG-----LG-LS-----
A_lyrata_XP_002889513	-----GV---SELE-----VG-----KSNLP-----
aAtIAA12_BDL_At1g04550	-----GV---SELE-----VG-----KSNLP-----
P_trichocarpa_XP_002311698	-----KV---EVVE-----AE-----ASSYP-----
P_trichocarpa_XP_002314509	-----KV---EVIE-----AE-----ASSYP-----
A_lyrata_XP_002885143	-----NTDQEKKLELR-----LG-----PPG-----
aAtIAA26_At3g16500	-----NTDQEKKLELR-----LG-----PPG-----
A_lyrata_XP_002891672	-----FKTEKKLELK-----LG-----PPG-----
aAtIAA18_At1g51950	-----FKTEKKLELK-----LG-----PPG-----
O_sativa_Os02g0228900_NP_001046357	-----QEEEEKTLELS-----LG-----LPGGGWRAACRDKGTTHKHSIA---A
P_trichocarpa_XP_002309532	-----KASEDKKLELR-----LG-----PPG-----
P_trichocarpa_XP_002324753	-----SSSEDRKLELR-----LG-----PPG-----
P_trichocarpa_XP_002303315	-----SSSEDRKLELR-----LG-----PPG-----
O_sativa_Os01g0741900_NP_001044208	-----RNAGFDGEEDKKLDLK-----LG-----LPG-----
O_sativa_Os05g0523300_NP_001056086	-----RNTNLDADEDKLELK-----LG-----LPG-----
O_sativa_Os01g0190300_NP_001042263	-----AAAGESGLELC-----LG-----LP-----
A_lyrata_XP_002872184	-----MEEKRLELR-----LA-----PPC-----
aAtIAA28_At5g25890	-----MEEKRLELR-----LA-----PPC-----
O_sativa_Os08g0109400_NP_001060811	-----VNSLELR-----LG-----ISSDND-----
P_patens_IAA1A_BAB71765	-----CCREELNLNESATTLO-----LG-----PPAAVKPSGQAD-----
P_patens_IAA1B_BAB71766	-----CCREELNLNESATTLO-----LG-----PPAAVKPSGHAD-----
P_patens_XP_001765051	-----CSREELNLNESATALO-----LG-----PPAGLKPTGQSD-----
A_lyrata_XP_002882951	-----L---GL-EI-TELR-----LG-----LPGR-----
aAtIAA19_MSG2_At3g15540	-----L---GL-EI-TELR-----LG-----LPGR-----
A_lyrata_XP_002894404	-----L---GL-EI-TELR-----LG-----LPGD-----
aAtIAA6_SHY1_At1g52830	-----L---AL-EI-TELR-----LG-----LPGD-----
P_trichocarpa_XP_002299626	-----L---GL-EI-TELR-----LG-----PPGS-----
P_trichocarpa_XP_002304179	-----L---GL-EI-TELR-----LG-----LPGS-----
A_lyrata_XP_002892874	-----NL---GL-EI-TELR-----LG-----LPGDII-----
aAtIAA5_At1g15580	-----NL---GL-EI-TELR-----LG-----LPGD-I-----
A_lyrata_XP_002887832	-----DL-GG-IELT-----LA-----LPGTP-----
aAtIAA15_At1g80390	-----DL-GG-TELT-----LA-----LPGTP-----
P_trichocarpa_XP_002299625	-----V---SF-KE-TELT-----LG-----LPGES-----
O_sativa_Os01g0178500_NP_001042192	-----L---DF-ED-TALT-----LR-----LPGSL-----
O_sativa_Os05g0178600_NP_001054800	-----L---DF-ED-TALT-----LR-----LPGSS-----
O_sativa_Os06g0597000_NP_001057986	-----L---DY-DD-TALT-----LA-----LPGS-----
O_sativa_Os03g0633800_NP_001050714	-----LI---KA-T---ELR-----LG-----LPGT-----
O_sativa_Os12g0601400_NP_001067210	-----L---KA-T---ELR-----LG-----LPGT-----
O_sativa_Os03g0797800_NP_001051565	-----SI---DA-E---LR-----LG-----LPGS-----
O_sativa_Os07g0182400_NP_001059051	-----ET---DA-DN-LCLR-----LG-----PPGSSITTTTT-----
P_trichocarpa_XP_002300804	-----HL---NL-KA-TELR-----LG-----LPGSDEPEK-----
P_trichocarpa_XP_002307625	-----DL---NL-KA-TELR-----LG-----LPGSDEPEK-----
P_trichocarpa_XP_002319642	-----DL---NL-DA-TELR-----LG-----LPGTATKQS-----
P_trichocarpa_XP_002328339	-----DL---NL-EA-TELR-----LG-----LPGTATEQL-----
P_trichocarpa_XP_002312567	-----DL---NL-KE-TELR-----LG-----LPGTGCTNE-----
P_trichocarpa_XP_002314656	-----DL---NL-KA-TELR-----LG-----LPGTSC'TNE-----
A_lyrata_XP_002870306	-----GL---NL-KD-TELR-----LG-----LPGAQEEQ-----
aAtIAA1_AXR5_At4g14560	-----GL---NL-KD-TELR-----LG-----LPGAQEEQ-----
A_lyrata_XP_002885542	-----EL---NL-KD-TELC-----LG-----LPGRTEEIK-----
aAtIAA2_At3g23030	-----EL---NL-KD-TELC-----LG-----LPGRTEKIK-----
A_lyrata_XP_002865407	-----LV---NL-KA-TELR-----LG-----LPGTEETVS-----
aAtIAA4_At5g43700	-----LV---NL-KA-TELR-----LG-----LPGTEETVS-----
A_lyrata_XP_002892202	-----FV---NL-KE-TELR-----LG-----LPGTDNVCE-----
aAtIAA3_SHY2_At1g04240	-----FV---NL-KE-TELR-----LG-----LPGTDNVCE-----
A_lyrata_XP_002864971	-----KTL---KL-WD-VETGSVIKTLIGHSNYVFCANFNQSNMIVSGSFDETVR1WDVKSGKC
O_sativa_Os090527700_NP_001063732	-----GV---EL---TELT-----LG-----PPGAS-----
A_lyrata_XP_002868277	-----M---NL-KE-TELC-----LG-----LPGGA-----
aAtIAA14_SLR_At4g14550	-----M---NL-KE-TELC-----LG-----LPGGT-----
A_lyrata_XP_002883395	-----M---NL-KA-TELC-----LG-----LPGGA-----
aAtIAA7_AXR2_At3g23050	-----M---NL-KA-TELC-----LG-----LPGGA-----
P_trichocarpa_XP_002311658	-----L---NY-KE-TELC-----LG-----LPGAVG-----
A_lyrata_XP_002889499	-----L---NL-KE-TELC-----LG-----LPGGD-----
aAtIAA17_AXR3_At1g04250	-----L---NL-RE-TELC-----LG-----LPGGD-----
A_lyrata_XP_002884465	-----I---NF-EA-TELR-----LG-----LPGGNH-----
aAtIAA16_At3g04730	-----I---NF-EA-TELR-----LG-----LPGGNH-----
P_trichocarpa_XP_002302075	-----M---GF-EE-TELR-----LG-----LPGNGG-----
P_trichocarpa_XP_002328494	-----I---NY-EE-TELR-----LG-----LPGGAS-----
P_trichocarpa_XP_002319075	-----I---NF-EE-TELR-----LG-----LPGGIG-----
P_trichocarpa_XP_002306817	-----M---RF-EE-TELR-----LG-----LPGNGG-----
O_sativa_Os03g0633500_NP_001050713	-----L---GF-DE-TELR-----LG-----LPGAG-----

O_sativa_Os12g0601300_NP_001067209	--L---AF-EA-TELR-----LG-----LPGGGG-----
O_sativa_Os03g0742900_NP_001051230	--A---DV-DVGTCLR-----LG-----LPGGGG-----
O_sativa_Os01g0675700_NP_001043847	GEA---RG-PR-LTLR-----LG-----LPGSESPERE-----
O_sativa_Os05g0559400_NP_001056300	AEV---VG-AH-LALR-----LG-----LPGSESPARAEA-----
O_sativa_Os01g0231000_NP_001042495	VDL---KG---TELR-----LG-----LPGSESPDRRP-----
O_sativa_Os06g0335500_NP_001057554	-----LA-TELR-----LG-----LPGTAAEEAESE-----
P_trichocarpa_XP_002298231	TSL---NM-KE-TELR-----LG-----LPGSQSPERKP-----
P_trichocarpa_XP_002303297	TSL---NL-KE-TELR-----LG-----LPGYQSPERKL-----
P_trichocarpa_XP_002331172	KGL---NL-KA-TELR-----LG-----LPGSDSPERGN-----
A_lyrata_XP_002867425	NGL---NF-KA-TELR-----LG-----LPGSESPER-----
aAtIAA27_PAP2_At4g29080	NGL---NF-KA-TELR-----LG-----LPGSESPER-----
aAtIAA8_At2g22670	SNL---NF-KA-TELR-----LG-----LPESQSPERETD-----
aAtIAA9_At5g5670	ATI---SL-KA-TELT-----LG-----LPGSQSPARDTE-----
A_lyrata_XP_002864969	ATI---SL-KA-TELT-----LG-----LPGSQSPARDTE-----
A_lyrata_XP_002878628	SNL---NF-KA-TELR-----LG-----LPESQSPERETD-----
A_lyrata_XP_002862301	ATI---SL-KA-TELT-----LG-----LPGSQSPARDTE-----
P_trichocarpa_XP_002302351	TSL---NL-KA-TELR-----LG-----LPGSQSPERNHE-----

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aAtIAA29_At4g32280	G---TEKLRFEATFGLGN-----VEENCYMP-----
P_trichocarpa_XP_002308067	-----DKKRSFIDASEESS-----RNEDVPR-----
P_trichocarpa_XP_002324639	-----DKKRSFIDAFEESS-----GNEDGPO-----
P_trichocarpa_XP_002309635	L---DNKRSFEVAFKFN-----IKDASQ-----
P_trichocarpa_XP_002300855	-----TSATG-----
P_trichocarpa_XP_002307573	-----TSATG-----
O_sativa_Os02g0141100_NP_001045857	V---EMEGVDPNSNGLFG-----INNDNL-----
O_sativa_Os02g0805100_NP_001048437	-----KRGFREAFQET-----
O_sativa_Os06g0166500_NP_001056915	S---CRKRGFEALGG-----
A_lyrata_XP_002864517	-----DTTTPFIS-----
P_trichocarpa_XP_002324470	-----SSVPNFMA-----
O_sativa_Os04g0653300_NP_001054106	-----PTTSEQER-----
A_lyrata_XP_002878437	-----NPFVSSSN-----TRN-----
aAtIAA33_At5g57420	-----DTTTPFIP-----
aAtIAA30_At3g62100	-----NPFVSSSN-----TRN-----
A_lyrata_XP_002880275	-----NPFVSSSN-----TRN-----
aAtIAA20_At2g46990	-----NPFVSSSN-----TRN-----
P_trichocarpa_XP_002302809	-----SVSGESSFPH-----VKRD-----
P_trichocarpa_XP_002320253	-----SVSKSSLQ-----LKKD-----
O_sativa_Os01g0286900_NP_001042778	-----GLASR-----RR-----
O_sativa_Os02g0723400_NP_001047972	-----CRPPATAAK-----RRSL-----
A_lyrata_XP_002885218	-----TKPSPSESS-----
aAtIAA31_At3g17600	-----TKPSPSESS-----
O_sativa_Os11g0221300_NP_001067526	-----GGVIDLG-----LSLS-----
A_lyrata_XP_002875064	-----GGVIDLG-----LSLR-----
aAtIAA32_MEE10_At2g01200	-----GGVIDLG-----LSLR-----
aAtIAA34_At1g15050	-----GGVIDLG-----LSLR-----
A_lyrata_XP_002892847	-----GGVIDLG-----LSLR-----
P_trichocarpa_XP_002314837	-----DGIIDLG-----LSLR-----
A_lyrata_XP_002869489	V---GNELELGLTSLG-----PKG-----YRDC-----
aAtIAA11_At4g28640	I---GNELELGLTSLG-----RKG-----YRDC-----
P_trichocarpa_XP_002303110	D---EGELELGLSLGG-----ASG-----FKDFQORSS-----
O_sativa_Os02g0817600_NP_001048522	D---DEELELGLSLGSK-----KQ-----QQQOHAP-----
A_lyrata_XP_002889491	S---ETELDLALGLSIGL-----KG-----RRKVRS-----
aAtIAA10_At1g04100	S---ETELDLALGLSIG-----RRKVRS-----
A_lyrata_XP_002881274	L---GGGTAAKIGKSGG-----GG-----AWGERG-----
aAtIAA13_At2g33310	L---GGGTAAKIGKSGG-----GG-----AWGERG-----
A_lyrata_XP_002889513	A---ESELELGLGLSLG-----GG-----AWKERG-----
aAtIAA12_BDL_At1g04550	A---ESELELGLGLSLG-----GG-----AWKERG-----
P_trichocarpa_XP_002311698	V---EAELELGLSLGSGGRG-----GGGGGKGANARGERG-----
P_trichocarpa_XP_002314509	V---EAELELGLGLSLG-----SGGGGKGANAWGECG-----
A_lyrata_XP_002885143	-----GDEEDHSAIK-----KKNTE-----
aAtIAA26_At3g16500	-----GDEEDHSAIK-----KKNTE-----
A_lyrata_XP_002891672	-----EEDDDSSI-----
aAtIAA18_At1g51950	-----EEDDES-M-----
O_sativa_Os02g0228900_NP_001046357	A---AAADDDGDKSSML-----SLGYS-----
P_trichocarpa_XP_002309532	-----E-ISLVYKTN-----PT-----
P_trichocarpa_XP_002324753	-----EDWSLKSTSN-----RERRERHKS-----
P_trichocarpa_XP_002303315	-----FIEDDEAETLRD-----YRLQQ-ES-----
O_sativa_Os01g0741900_NP_001044208	-----VQOEERAADSRE-----KIQQQQRES-----
O_sativa_Os05g0523300_NP_001056086	-----AYFSSSSSS-----
O_sativa_Os01g0190300_NP_001042263	-----HTAM-----
A_lyrata_XP_002872184	-----

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aAtIAA28_At5g25890 -----H---QFTSN-----
O_sativa_Os08g0109400_NP_001060811 -----QISGGGAASP-----WLGVG-----
P_patens_IAA1A_BAB71765 G----DDAHDEGAGPENPAKRSAHYHMQQESLADGRKAAAEMGSFKIQRKNILEEFRAMKA
P_patens_IAA1B_BAB71766 G----ADAHDEGAGPENPAKRPAHHMQQESLADGRKAAAEMGSFKIQRKNILEEFRAMKA
P_patens_XP_001765051 V----VLAEAAAAGPENPAKRPAHYHLQQNSTVDVKKPVAEAVSTKNQRK-IIEEFRAKKA
A_lyrata_XP_002882951 -----DVAEK-----MIK-----
aAtIAA19_MSG2_At3g15540 -----DVAEK-----MMK-----
A_lyrata_XP_002894404 -----NYSEISIW-----GS-KNK-----
aAtIAA6_SHY1_At1g52830 -----NYSEISVC-----GSSKKK-----
P_trichocarpa_XP_002299626 -----ENGPKE-----NEK-----
P_trichocarpa_XP_002304179 -----DDGHE-----NDK-----
A_lyrata_XP_002892874 -----VVSGQS-----ILGK-----
aAtIAA5_At1g15580 -----VVSGES-----ISGK-----
A_lyrata_XP_002887832 -----TNASDGPKE-----KCRN-----
aAtIAA15_At1g80390 -----TNASEGPK-----KFGN-----
P_trichocarpa_XP_002299625 -----RGLALIEK-----TSG-----
O_sativa_Os01g0178500_NP_001042192 -----AAAAADP-----DRK-----
O_sativa_Os05g0178600_NP_001054800 -----SSSSSSSS-----SSS-----
O_sativa_Os06g0597000_NP_001057986 -----SSSSSSSTA-----DPE-----
O_sativa_Os03g0633800_NP_001050714 -----ADDLPS-----TPRGK-----
O_sativa_Os12g0601400_NP_001067210 -----EEEEAP-----PP-ST-----
O_sativa_Os03g0797800_NP_001051565 -----GGGDGVAAK-----KRRSA-----
O_sativa_Os07g0182400_NP_001059051 -----TGGADPAK-----RSLGA-----
P_trichocarpa_XP_002300804 -----PSTTPS-----VRSN-----
P_trichocarpa_XP_002307625 -----PSTTPS-----VRSN-----
P_trichocarpa_XP_002319642 -----EKQTPNSN-----LAKSN-----
P_trichocarpa_XP_002328339 -----EKQTPNSN-----VTKSN-----
P_trichocarpa_XP_002312567 -----KGVSG-----ARNN-----
P_trichocarpa_XP_002314656 -----EQAVSG-----ARNN-----
A_lyrata_XP_002870306 -----QQEVS-----CVRSN-----
aAtIAA1_AXR5_At4g14560 -----QLELS-----CVRSN-----
A_lyrata_XP_002885542 -----EEQEV-----CVKSN-----
aAtIAA2_At3g23030 -----EEQEV-----CVKSN-----
A_lyrata_XP_002865407 -----CGKSN-----
aAtIAA4_At5g43700 -----CGKSN-----
A_lyrata_XP_002892202 -----EKESIISC-----CNNNN-----
aAtIAA3_SHY2_At1g04240 -----AKER-VSC-----CNNNN-----
A_lyrata_XP_002864971 L----KVLPAHSVP-VTC-----VDFNR-----
O_sativa_Os090527700_NP_001063732 -----ARR-ARR-----GRKN-----
A_lyrata_XP_002868277 -----ETVECPKS-----GVGN-----
aAtIAA14_SLR_At4g14550 -----ETVESPAKS-----GVGN-----
A_lyrata_XP_002883395 -----EAVESPAKS-----AVGS-----
aAtIAA7_AXR2_At3g23050 -----EAVESPAKS-----AVGS-----
P_trichocarpa_XP_002311658 -----AKNEVETPNK-----ATG-----
A_lyrata_XP_002889499 -----TVAPVT-----GN-----
aAtIAA17_AXR3_At1g04250 -----TVAPVT-----GN-----
A_lyrata_XP_002884465 -----G---GEMVGKY-----N-G-----
aAtIAA16_At3g04730 -----G---GEMAGKN-----N-G-----
P_trichocarpa_XP_002302075 -----G-AEG-EMVR-----
P_trichocarpa_XP_002328494 -----NGNDG-EAAKG-----N-G-----
P_trichocarpa_XP_002319075 -----NGNDG-EVAKS-----N-G-----
P_trichocarpa_XP_002306817 -----GGTEGGEFAR-----
O_sativa_Os03g0633500_NP_001050713 -----ELAARS-----S-G-----
O_sativa_Os12g0601300_NP_001067209 -----DGDAAAAAARS-----SSG-----
O_sativa_Os03g0742900_NP_001051230 -----GAAEAAA-----KAA-----
O_sativa_Os01g0675700_NP_001043847 -----VVAAGLTLG-----PLPPTTT-----KAAS-----
O_sativa_Os05g0559400_NP_001056300 E----AVVVDAAALTLG-----PAPPP-----RGGA-----
O_sativa_Os01g0231000_NP_001042495 -----AAIAAAAATAT-----TLELLP-----AKGA-----
O_sativa_Os06g0335500_NP_001057554 -----GGGGGGTDAAP-----LTLELLP-----KGA-----
P_trichocarpa_XP_002298231 -----TVPAAGVSLVGKIDTNNNTNAYS LIP-VKNLVSGA-----
P_trichocarpa_XP_002303297 -----TLPAAGVSLFGKIDTNNNTNGYPLRP-LKNLVSGT-----
P_trichocarpa_XP_002331172 -----ENQQLGFSLN-----NNNSKD-----KSFVSGA-----
A_lyrata_XP_002867425 -----VDSRFLALN-----KSSCP-----VSGA-----
aAtIAA27_PAP2_At4g29080 -----VDSRFLALN-----KSSCP-----VSGA-----
aAtIAA8_At2g22670 F----GLLSPRTPEKLLFPLLPSKDNGSATTGHKNVSGN-----
aAtIAA9_At5g65670 L----NLLSPAKLDEKPFPLLPSKDEICSSS-QKNNASGN-----
A_lyrata_XP_002864969 L----NLLSPAKLDEKPFPLLPSKDEICSSS-QKNNASGN-----
A_lyrata_XP_002878628 F----GLLSPRTLDEKLLFPLLPCDNTSATTGHKNVSGN-----
A_lyrata_XP_002862301 L----NLLSPAKLDEKPFPLLPSKDEICSSS-QKNNASGN-----
P_trichocarpa_XP_002302351 L----SLLSSALLDEKPFPLHPSNDGHYSST-QKNVSGN-----

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aAtIAA29_At4g32280	-----KQR-----LFALNG--Q
P_trichocarpa_XP_002308067	-----TLP-----LLVWNN--Q
P_trichocarpa_XP_002324639	-----TLP-----LLVWNN--Q
P_trichocarpa_XP_002309635	-----ELP-----LLLWSG--Q
P_trichocarpa_XP_002300855	-----
P_trichocarpa_XP_002307573	-----
O_sativa_Os02g0141100_NP_001045857	-----LGFPIETED
O_sativa_Os02g0805100_NP_001048437	-----LLL--D
O_sativa_Os06g0166500_NP_001056915	-----FKT--D
A_lyrata_XP_002864517	-----KPASK-----NHN--N
P_trichocarpa_XP_002324470	-----KPIT-----
O_sativa_Os04g0653300_NP_001054106	-----RQKQ-----HR--G
A_lyrata_XP_002878437	-----L--ST--D
aAtIAA33_At5g57420	-----KPASK-----NHN--N
aAtIAA30_At3g62100	-----L--ST--D
A_lyrata_XP_002880275	-----L--ST--D
aAtIAA20_At2g46990	-----L--ST--D
P_trichocarpa_XP_002302809	-----L--ST--D
P_trichocarpa_XP_002320253	-----L--ST--D
O_sativa_Os01g0286900_NP_001042778	-----
O_sativa_Os02g0723400_NP_001047972	-----I--ST--D
A_lyrata_XP_002885218	-----V--N
aAtIAA31_At3g17600	-----V--N
O_sativa_Os11g0221300_NP_001067526	-----
A_lyrata_XP_002875064	-----TIQHETYLP
aAtIAA32_MEE10_At2g01200	-----TIQHETYLP
aAtIAA34_At1g15050	-----TIQHEIYHS
A_lyrata_XP_002892847	-----TIQHEIYHT
P_trichocarpa_XP_002314837	-----TLKPEAYHP
A_lyrata_XP_002869489	-----RVSYAD--D
aAtIAA11_At4g28640	-----RV--YAD--D
P_trichocarpa_XP_002303110	-----Q-----QYA-----RILTAK--D
O_sativa_Os02g0817600_NP_001048522	-----C-----RILTAK--D
A_lyrata_XP_002889491	-----SLSSSS--S
aAtIAA10_At1g04100	-----SLSSSS--S
A_lyrata_XP_002881274	-----RLLTAK--D
aAtIAA13_At2g33310	-----RLLTAK--D
A_lyrata_XP_002889513	-----RILTAK--D
aAtIAA12_BDL_At1g04550	-----RILTAK--D
P_trichocarpa_XP_002311698	-----RILTAK--D
P_trichocarpa_XP_002314509	-----RILTAK--D
A_lyrata_XP_002885143	-----TRNIKKE
aAtIAA26_At3g16500	-----IRNIKKE
A_lyrata_XP_002891672	-----IRHIKKE
aAtIAA18_At1g51950	-----IRHMKKE
O_sativa_Os02g0228900_NP_001046357	-----T-----LVSHSQGKA
P_trichocarpa_XP_002309532	-----
P_trichocarpa_XP_002324753	-----
P_trichocarpa_XP_002303315	-----QL-----LSFG-----YFTNGNQOT
O_sativa_Os01g0741900_NP_001044208	-----PS-----LSLS-----FFPKHSKTT
O_sativa_Os05g0523300_NP_001056086	-----SSE-----PSIG-----CFPTHSKPT
O_sativa_Os01g0190300_NP_001042263	-----
A_lyrata_XP_002872184	-----NHV---
aAtIAA28_At5g25890	-----NNINGS
O_sativa_Os08g0109400_NP_001060811	-----V-----HPWSLAARQ
P_patens_IAA1A_BAB71765	HAHMTKSPKTVQTMQHNMHVSYSGAQMAFGGAKNNGVK-----RVFSEAVVA
P_patens_IAA1B_BAB71766	QAHMTKSPKPVHTMQHNMHASFSGAQMAFGGAKNNGVK-----RVFSEAVGG
P_patens_XP_001765051	---AQD---AKAMQSMQHNVVRASYPGAQSVFPGAKNNGVK-----RGFSEAVGT
A_lyrata_XP_002882951	-----K-----RAFTEMNMT
aAtIAA19_MSG2_At3g15540	-----K-----RAFTEMNMT
A_lyrata_XP_002894404	-----K-----RVLSDM--MT
aAtIAA6_SHY1_At1g52830	-----K-----RVLSDM--MT
P_trichocarpa_XP_002299626	-----K-----RVFSEL---
P_trichocarpa_XP_002304179	-----K-----RVFSEV---
A_lyrata_XP_002892874	-----K-----RASPEV---
aAtIAA5_At1g15580	-----K-----RASPEV---
A_lyrata_XP_002887832	-----K-----RRFLET--VD
aAtIAA15_At1g80390	-----K-----RRFLET--VD
P_trichocarpa_XP_002299625	-----K-----RGFLET--VD
O_sativa_Os01g0178500_NP_001042192	-----RSSPSS--SD
O_sativa_Os05g0178600_NP_001054800	-----SSSPSE--PD
O_sativa_Os06g0597000_NP_001057986	-----RKRAAH--AD
O_sativa_Os03g0633800_NP_001050714	-----K-----RAAAAE--D-

O_sativa_Os12g0601400_NP_001067210	-----P-----RAGSK----
O_sativa_Os03g0797800_NP_001051565	-----S-----STVKSE-AS
O_sativa_Os07g0182400_NP_001059051	-----K-----RSLEST-DS
P_trichocarpa_XP_002300804	-----K-----RASPEI-SE
P_trichocarpa_XP_002307625	-----K-----RASPEI-SE
P_trichocarpa_XP_002319642	-----K-----RSLPDM-NE
P_trichocarpa_XP_002328339	-----K-----RSLPDM-NE
P_trichocarpa_XP_002312567	-----K-----RPFPET-RE
P_trichocarpa_XP_002314656	-----K-----RPLPET-RE
A_lyrata_XP_002870306	-----N-----KRKNND-SK
aAtIAA1_AXR5_At4g14560	-----N-----KRKNND-ST
A_lyrata_XP_002885542	-----N-----KRQFED-TR
aAtIAA2_At3g23030	-----N-----KRLFEE-TR
A_lyrata_XP_002865407	-----K-----RALLDD-TE
aAtIAA4_At5g43700	-----K-----RVLPEA-TE
A_lyrata_XP_002892202	-----K-----RALSSD-NE
aAtIAA3_SHY2_At1g04240	-----K-----RVLSTP-TE
A_lyrata_XP_002864971	-----D-----DGLSIVSSSYDGLCRIWDSGTGHCVK-----TLIDDE-NP
O_sativa_Os090527700_NP_001063732	-----K-----RGFSET-VG
A_lyrata_XP_002868277	-----K-----RGFSET-VD
aAtIAA14_SLR_At4g14550	-----K-----RGFSET-VD
A_lyrata_XP_002883395	-----K-----RGFSET-VD
aAtIAA7_AXR2_At3g23050	-----K-----RGFSET-VD
P_trichocarpa_XP_002311658	-----K-----RGFAET-VD
A_lyrata_XP_002889499	-----K-----RGFSET-VD
aAtIAA17_AXR3_At1g04250	-----K-----RGFSET-VD
A_lyrata_XP_002884465	-----K-----RGFSET-VD
aAtIAA16_At3g04730	-----K-----RGFSET-VD
P_trichocarpa_XP_002302075	-----K-----RGFSET-VD
P_trichocarpa_XP_002328494	-----K-----RGFSET-VD
P_trichocarpa_XP_002319075	-----K-----RGFSET-VD
P_trichocarpa_XP_002306817	-----K-----RGFSET-VD
O_sativa_Os03g0633500_NP_001050713	-----K-----RGFAET-ID
O_sativa_Os12g0601300_NP_001067209	-----K-----RGFAET-ID
O_sativa_Os03g0742900_NP_001051230	-----K-----RGFEET-ID
O_sativa_Os01g0675700_NP_001043847	-----K-----RAFPPS-SP
O_sativa_Os05g0559400_NP_001056300	-----K-----RGFVDS-LD
O_sativa_Os01g0231000_NP_001042495	-----K-----RVFPDE-AA
O_sativa_Os06g0335500_NP_001057554	-----K-----RGFADA-IV
P_trichocarpa_XP_002298231	-----K-----RVFSDA-ID
P_trichocarpa_XP_002303297	-----K-----RGFSDA-IV
P_trichocarpa_XP_002331172	-----R-----RGFSVA-IH
A_lyrata_XP_002867425	-----K-----RVFSDA-IN
aAtIAA27_PAP2_At4g29080	-----K-----RVFSDA-IN
aAtIAA8_At2g22670	-----K-----RGFADT-WD
aAtIAA9_At5g65670	-----K-----RGFSDT-MD
A_lyrata_XP_002864969	-----K-----RGFSDT-MD
A_lyrata_XP_002878628	-----K-----RGFADT-WD
A_lyrata_XP_002862301	-----K-----RGFSDT-MD
P_trichocarpa_XP_002302351	-----K-----RVFSDA-MD

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aAtIAA29_At4g32280	P-----
P_trichocarpa_XP_002308067	P-----
P_trichocarpa_XP_002324639	P-----
P_trichocarpa_XP_002309635	P-----
P_trichocarpa_XP_002300855	-----
P_trichocarpa_XP_002307573	-----
O_sativa_Os02g0141100_NP_001045857	LLINALDSVK-----
O_sativa_Os02g0805100_NP_001048437	-----
O_sativa_Os06g0166500_NP_001056915	D-----
A_lyrata_XP_002864517	S-----
P_trichocarpa_XP_002324470	-----
O_sativa_Os04g0653300_NP_001054106	-----
A_lyrata_XP_002878437	-----
aAtIAA33_At5g57420	S-----
aAtIAA30_At3g62100	-----
A_lyrata_XP_002880275	-----
aAtIAA20_At2g46990	-----
P_trichocarpa_XP_002302809	-----
P_trichocarpa_XP_002320253	-----
O_sativa_Os01g0286900_NP_001042778	-----

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O_sativa_Os02g0723400_NP_001047972 -----
A_lyrata_XP_002885218 -----
aAtIAA31_At3g17600 -----
O_sativa_Os11g0221300_NP_001067526 -----
A_lyrata_XP_002875064 P-----
aAtIAA32_MEE10_At2g01200 P-----
aAtIAA34_At1g15050 -----
A_lyrata_XP_002892847 -----
P_trichocarpa_XP_002314837 -----
A_lyrata_XP_002869489 -----
aAtIAA11_At4g28640 -----
P_trichocarpa_XP_002303110 LPSKVSSSSCC-----
O_sativa_Os02g0817600_NP_001048522 LQP-----AAA-----
A_lyrata_XP_002889491 SS-----
aAtIAA10_At1g04100 S-----
A_lyrata_XP_002881274 -----
aAtIAA13_At2g33310 -----
A_lyrata_XP_002889513 -----
aAtIAA12_BDL_At1g04550 -----
P_trichocarpa_XP_002311698 -----
P_trichocarpa_XP_002314509 -----
A_lyrata_XP_002885143 -----
aAtIAA26_At3g16500 -----
A_lyrata_XP_002891672 -----
aAtIAA18_At1g51950 -----
O_sativa_Os02g0228900_NP_001046357 -----
P_trichocarpa_XP_002309532 -----
P_trichocarpa_XP_002324753 -----
P_trichocarpa_XP_002303315 -----
O_sativa_Os01g0741900_NP_001044208 -----
O_sativa_Os05g0523300_NP_001056086 -----
O_sativa_Os01g0190300_NP_001042263 -----
A_lyrata_XP_002872184 -----
aAtIAA28_At5g25890 -----
O_sativa_Os08g0109400_NP_001060811 G-----
P_patens_IAA1A_BAB71765 NHNAASGVGVGVREGNDDVSRCEEMNGTEQLDLKVHLPKGMGMARMAPVSGQNGSAWRN-----
P_patens_IAA1B_BAB71766 NHIAASGVGVGVREGNDDVSRCEEMNGTEQLDLKVHLPKGMGMARMAPVSGQNGSAWRN-----
P_patens_XP_001765051 NFNASSGAGGAVREGNCDMNRGEGVGGTEQPESKVNHLQSMGMSRMAPGSGGQNGSAWRN-----
A_lyrata_XP_002882951 S-----
aAtIAA19_MSG2_At3g15540 S-----
A_lyrata_XP_002894404 S-----
aAtIAA6_SHY1_At1g52830 S-----
P_trichocarpa_XP_002299626 -----
P_trichocarpa_XP_002304179 -----
A_lyrata_XP_002892874 -----
aAtIAA5_At1g15580 -----
A_lyrata_XP_002887832 LKLG-----
aAtIAA15_At1g80390 LKLG-----
P_trichocarpa_XP_002299625 LNLGRS-----SN-----
O_sativa_Os01g0178500_NP_001042192 -----A-----
O_sativa_Os05g0178600_NP_001054800 RKRA-----SA-----
O_sativa_Os06g0597000_NP_001057986 -----
O_sativa_Os03g0633800_NP_001050714 -----N-----
O_sativa_Os12g0601400_NP_001067210 -----
O_sativa_Os03g0797800_NP_001051565 -----
O_sativa_Os07g0182400_NP_001059051 M-----A-----
P_trichocarpa_XP_002300804 E-----S-----
P_trichocarpa_XP_002307625 E-----S-----
P_trichocarpa_XP_002319642 E-----P-----
P_trichocarpa_XP_002328339 D-----S-----
P_trichocarpa_XP_002312567 E-----G-----
P_trichocarpa_XP_002314656 E-----R-----
A_lyrata_XP_002870306 -----
aAtIAA1_AXR5_At4g14560 -----
A_lyrata_XP_002885542 E-----
aAtIAA2_At3g23030 D-----
A_lyrata_XP_002865407 K-----E-----
aAtIAA4_At5g43700 K-----E-----
A_lyrata_XP_002892202 K-----E-----
aAtIAA3_SHY2_At1g04240 K-----E-----
A_lyrata_XP_002864971 PVSFVKFSPNGKFILIGTLDNKL-----EETDHGRA-----
O_sativa_Os090527700_NP_001063732 -----
A_lyrata_XP_002868277 LKLNLO-----SN-----

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aAtIAA14_SLR_At4g14550
A_lyrata_XP_002883395
aAtIAA7_AXR2_At3g23050
P_trichocarpa_XP_002311658
A_lyrata_XP_002889499
aAtIAA17_AXR3_At1g04250
A_lyrata_XP_002884465
aAtIAA16_At3g04730
P_trichocarpa_XP_002302075
P_trichocarpa_XP_002328494
P_trichocarpa_XP_002319075
P_trichocarpa_XP_002306817
O_sativa_Os03g0633500_NP_001050713
O_sativa_Os12g0601300_NP_001067209
O_sativa_Os03g0742900_NP_001051230
O_sativa_Os01g0675700_NP_001043847
O_sativa_Os05g0559400_NP_001056300
O_sativa_Os01g0231000_NP_001042495
O_sativa_Os06g0335500_NP_001057554
P_trichocarpa_XP_002298231
P_trichocarpa_XP_002303297
P_trichocarpa_XP_002331172
A_lyrata_XP_002867425
aAtIAA27_PAP2_At4g29080
aAtIAA8_At2g22670
aAtIAA9_At5g65670
A_lyrata_XP_002864969
A_lyrata_XP_002878628
A_lyrata_XP_002862301
P_trichocarpa_XP_002302351

LKLNLO-----SN-----
LMLNLO-----SN-----
LMLNLO-----SN-----
LKLNLO-----A-----
LKLNLNNEP-----EN-----
LKLNLNNEP-----AN-----
LKLNLS-----S-----
LKLNLS-----S-----
LKLKLS-----S-----
LKLNLS-----T-----
LKLNLS-----T-----
LKLNLS-----S-----
LKLKLPAA-----PAAVSG-----
LKLKLEPAA-----AAVDDDDDK-----
LKLKLPAG-----
RH-----GASS-----
R-----SE-----
LTPP-----TAAA-----
-----G-----
GSTGKWFVSG-----GDNGNPQKSRVA-----
GSSGKWFVSGSNGSEVDLKGKAILFSPRGDNGNSQKSCVA-----
GGSANWVFSG-----NAGSDPNFSLRG-----
-ESNKWIFST-----GSTTATGDVGS-----
-DSNKWVFSF-----GSTTATGDVGS-----
EFSGVKGSVRPGG-----G-----INMMLS-----
QFAEAKSSVYTE-----KNWMFP-----
QFAEAKSSVYTE-----KNWMFP-----
EFSGLKGSVRPGG-----INMMLS-----
QFAEAKSSVYTE-----KNWMFP-----
EFSESKFLSNSE-----VNAMLSRPPSPNMGKPKGMLENLGV-----

[
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aAtIAA29_At4g32280
P_trichocarpa_XP_002308067
P_trichocarpa_XP_002324639
P_trichocarpa_XP_002309635
P_trichocarpa_XP_002300855
P_trichocarpa_XP_002307573
O_sativa_Os02g0141100_NP_001045857
O_sativa_Os02g0805100_NP_001048437
O_sativa_Os06g0166500_NP_001056915
A_lyrata_XP_002864517
P_trichocarpa_XP_002324470
O_sativa_Os04g0653300_NP_001054106
A_lyrata_XP_002878437
aAtIAA33_At5g57420
aAtIAA30_At3g62100
A_lyrata_XP_002880275
aAtIAA20_At2g46990
P_trichocarpa_XP_002302809
P_trichocarpa_XP_002320253
O_sativa_Os01g0286900_NP_001042778
O_sativa_Os02g0723400_NP_001047972
A_lyrata_XP_002885218
aAtIAA31_At3g17600
O_sativa_Os11g0221300_NP_001067526
A_lyrata_XP_002875064
aAtIAA32_MEE10_At2g01200
aAtIAA34_At1g15050
A_lyrata_XP_002892847
P_trichocarpa_XP_002314837
A_lyrata_XP_002869489
aAtIAA11_At4g28640
P_trichocarpa_XP_002303110
O_sativa_Os02g0817600_NP_001048522
A_lyrata_XP_002889491
aAtIAA10_At1g04100
A_lyrata_XP_002881274
aAtIAA13_At2g33310
A_lyrata_XP_002889513
aAtIAA12_BDL_At1g04550
P_trichocarpa_XP_002311698

-----NEEDE-----DPLESES-----
-----NEEDDP-----KDLDNHCNYS-----
-----NEDDFP-----KDLDNHSSNS-----
-----NEDD-----WNGEKKIS-----
-----SDIPLT-----
-----SDIPLN-----
-----YQNHISTDV-----ENNYPMQKDAL-----
-----DG-----SCCN-----
-----DNDDG-----NGRGGDG-----
-----NSSSE-----AAGRSFQG-----
-----FPG-----
-----KMLR-----
-----LRLG-----LSFGSS-----
-----NSSSG-----AAGRSFQG-----
-----LRLG-----LSFGSS-----
-----LRLG-----LSFGKS-----
-----LRLG-----LSFGTS-----
-----LRLG-----LGISTS-----
-----LRLG-----LSISTS-----
-----LRLG-----LTLSSV-----
-----LSLS-----LTFPST-----
-----LSLS-----LTFPST-----
-----ARVIGLDG-----YGELIDWSQ-----
-----ARMIGLDG-----YGELIDWSQ-----
-----SSSSSSSSSS-----LSRASVIAGI-----
-----SSSSSSSS-----LSRASVIAGI-----
-----SSTSSSSST-----LSRANATAGT-----
-----LSPDSSVSS-----SPAAAAAAGG-----
-----MTRESGT-----KRSADSS-----
-----LTRESGT-----KRSADSS-----
-----FPSVGS-----KRAADSA-----
-----FPSVGS-----KRAADSA-----
-----FPSVGS-----KRSAESS-----
-----FPSVGS-----KRSAESS-----
-----FPSV-----RAADSV-----

P_trichocarpa_XP_002314509	-----FPSV-----RAADSV-----
A_lyrata_XP_002885143	-----TEDKSFHCF-----NGNHFSSS-----
aAtIAA26_At3g16500	-----TEDKSFHCF-----NGNHFSPS-----
A_lyrata_XP_002891672	-----PKDKSILSL-----AGKHFSPPS-----
aAtIAA18_At1g51950	-----PKDKSILSL-----AGKYFSPPS-----
O_sativa_Os02g0228900_NP_001046357	-----NKNKGSPEE-----EEAHPPPATG-----
P_trichocarpa_XP_002309532	-----LEHTVGAKP-----SEGYWFTD-----
P_trichocarpa_XP_002324753	-----HKFPSSAEN-----SHVWFNKKQOGKVPVPSYLNFPSSSTPPTATATQ
P_trichocarpa_XP_002303315	-----SSTTTTTGA-----KRGFIDTVEDKTEGYNDQKQARAGCGKELAVE
O_sativa_Os01g0741900_NP_001044208	-----TSIG-TTGA-----KRGFFAIVGATLEGYN-QSHRDTEECGKELTLG
O_sativa_Os05g0523300_NP_001056086	-----TAAPAFALR-----SNGTNASK-----
O_sativa_Os01g0190300_NP_001042263	-----TIYL-----
A_lyrata_XP_002872184	-----KQKSSTK-----ETSFLSNN-----
aAtIAA28_At5g25890	-----KAALQAHQ-----RPNECAVQRE-----
O_sativa_Os08g0109400_NP_001060811	-----SFDNMQGPLNPFPRKSLVSKMPVDPGGDSSANASN-----
P_patens_IAA1A_BAB71765	-----LSFDNMQGPLNPFPRKSLVSKMPVDPGGDSSANASN-----
P_patens_IAA1B_BAB71766	-----INLEKMQGPLSTIFRKSLSMKSITLQDAGDSSIKCSS-----
P_patens_XP_001765051	-----SGSNSDQC-----ESGVVSSG-----
A_lyrata_XP_002882951	-----SGSNSDQC-----ESGVVSSG-----
aAtIAA19_MSG2_At3g15540	-----SSLNTE-N-----ENGVVSSA-----
A_lyrata_XP_002894404	-----SALDTE-N-----ENSVVSSV-----
aAtIAA6_SHY1_At1g52830	-----SGEANST-----
P_trichocarpa_XP_002299626	-----SGEANST-----
P_trichocarpa_XP_002304179	-----ESNMKC-----
A_lyrata_XP_002892874	-----EIDLKC-----
aAtIAA5_At1g15580	-----EGHENKY-----FSSLITN-----
A_lyrata_XP_002887832	-----EAHENNY-----ISSMVTN-----
aAtIAA15_At1g80390	-----VSDHKNKY-----SGESETDVP-----
P_trichocarpa_XP_002299625	-----ADAADNSS-----PLAAAADA-----
O_sativa_Os01g0178500_NP_001042192	-----TDDDPDNR-----LGSTATES-----
O_sativa_Os05g0178600_NP_001054800	-----HADAK-----
O_sativa_Os06g0597000_NP_001057986	-----NA-----NAAAADDDE-----
O_sativa_Os03g0633800_NP_001050714	-----RALAGEPDQ-----
O_sativa_Os12g0601400_NP_001067210	-----AC-----CGGAGARDV-----
O_sativa_Os03g0797800_NP_001051565	-----SG-----TGTSAAAGDE-----
O_sativa_Os07g0182400_NP_001059051	-----RS---KGS-----SSLSSN-VE-----
P_trichocarpa_XP_002300804	-----RS---KGS-----SSVSSN-VE-----
P_trichocarpa_XP_002307625	-----AGSSRENS-----STVSSNDKK-----
P_trichocarpa_XP_002319642	-----AG---RRES-----SSVSSNDKK-----
P_trichocarpa_XP_002328339	-----GA---NGK-----S---DAQ-HD-----
P_trichocarpa_XP_002312567	-----GA---KGK-----S---DPR-HD-----
P_trichocarpa_XP_002314656	-----
A_lyrata_XP_002870306	-----
aAtIAA1_AXR5_At4g14560	-----
A_lyrata_XP_002885542	-----
aAtIAA2_At3g23030	-----
A_lyrata_XP_002865407	-----IE---S-----TG-----
aAtIAA4_At5g43700	-----IE---S-----TG-----
A_lyrata_XP_002892202	-----NE---S-----SSR-----
aAtIAA3_SHY2_At1g04240	-----IE---S-----SSR-----
A_lyrata_XP_002864971	-----
O_sativa_Os090527700_NP_001063732	-----
A_lyrata_XP_002868277	-----KQGPVDLN-----VNGAPKEK-----
aAtIAA14_SLR_At4g14550	-----KQGHVDLN-----TNGAPKEK-----
A_lyrata_XP_002883395	-----KEGSVDLNN-----VAAAPKEK-----
aAtIAA7_AXR2_At3g23050	-----KEGSVDLKN-----VSAVPKEK-----
P_trichocarpa_XP_002311658	-----KEGVMDLNE-----NIKNITSKDKNH-----L-----
A_lyrata_XP_002889499	-----KEGSTTHD-----VVTFDSKEK-----
aAtIAA17_AXR3_At1g04250	-----KEGSTTHD-----VVTFDSKEK-----
A_lyrata_XP_002884465	-----TAMDSVSKV-----DLEN---MKEK-----
aAtIAA16_At3g04730	-----TAMDSVSKV-----DLEN---MKEK-----
P_trichocarpa_XP_002302075	-----KESGADPNH-----EKTSSLQREKN-----
P_trichocarpa_XP_002328494	-----KETGKDGSD-----QEKV-VMKEKT-----
P_trichocarpa_XP_002319075	-----KESGK-GGD-----EEK---VMKEKT-----
P_trichocarpa_XP_002306817	-----KEGGIDPNH-----EKT---QREKN-----
O_sativa_Os03g0633500_NP_001050713	-----EQAQEDKE-----DADAAAAAADEKMSMKRSAS-----
O_sativa_Os12g0601300_NP_001067209	-----EAAAADDREKKVDIVGADNDDASPPAAAAAGGMKRSAS-----
O_sativa_Os03g0742900_NP_001051230	-----MEEAAAG-----KAEAPAEKA---KR-----
O_sativa_Os01g0675700_NP_001043847	-----GSVAAAACQDK-----
O_sativa_Os05g0559400_NP_001056300	-----GRRAAATAGDDERG-----VREEEEEKGLG-----
O_sativa_Os01g0231000_NP_001042495	-----GKGKAAREGEVVG-----AEEEDK-----
O_sativa_Os06g0335500_NP_001057554	-----GPAGQRREAAGGKAA-----AAAAEAEIEEEK-----
P_trichocarpa_XP_002298231	-----GPAKKD-VAQSPKP-----VQEKNSQVAAN-----

P_trichocarpa_XP_002303297	-GPAKKDDVAQSPKP-----VQEKISQVAAAN-----
P_trichocarpa_XP_002331172	-ANSKGEFPHSSKPV-----VQENKSQVDGAN-----
A_lyrata_XP_002867425	-GSGPGSSVVKDGKS-----TTFPKPAVPVKE-----
aAtIAA27_PAP2_At4g29080	-GSGPRTSVVKDGKS-----TTFTKPAVPVKE-----
aAtIAA8_At2g22670	---PKVKDVSKS-----IQEERSHAKGG-----
aAtIAA9_At5g65670	-EAAATQSVTKKD-----VPQNIKPGQSST-----
A_lyrata_XP_002864969	-EAAATQSVTKKD-----VPQNIKPGQSST-----
A_lyrata_XP_002878628	---PKVKDVLK-----DERSHAKGG-----
A_lyrata_XP_002862301	-EAAATQSVTKKD-----VPQNIKPGQSST-----
P_trichocarpa_XP_002302351	-QQAKVKEIVAPK-----AGQERPHAANETRPLRN-----

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[
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aAtIAA29_At4g32280	-----SIVYDD---EE-----ENS---
P_trichocarpa_XP_002308067	-----FSSNKS---DG-----ESD---
P_trichocarpa_XP_002324639	-----CASNKS---DG-----ESD---
P_trichocarpa_XP_002309635	-----RSINKD---DE-----EEN---
P_trichocarpa_XP_002300855	-----SD-----MTAS---
P_trichocarpa_XP_002307573	-----SD-----MTAS---
O_sativa_Os02g0141100_NP_001045857	-----QEISTSMVSQSFQSD-----MAFNSID
O_sativa_Os02g0805100_NP_001048437	-----TSDDDC---RR-----RKK---
O_sativa_Os06g0166500_NP_001056915	-----DSDGEM---GN-----KRR---
A_lyrata_XP_002864517	-----FGLNVE---DD-----LVS---
P_trichocarpa_XP_002324470	-----F---ED---DD-----VVS---
O_sativa_Os04g0653300_NP_001054106	-----LSVQQG---DD-----VTA---
A_lyrata_XP_002878437	-----SG-QYY---NG-----GEN---
aAtIAA33_At5g57420	-----FGLNVE---DD-----LVS---
aAtIAA30_At3g62100	-----SG-QYY---NG-----GDN---
A_lyrata_XP_002880275	-----SGTQYF---NG-----G---
aAtIAA20_At2g46990	-----SGTQYF---NG-----G---
P_trichocarpa_XP_002302809	-----RQDNPS---TP-----SEQ---
P_trichocarpa_XP_002320253	-----QQENPS---TP-----SDQ---
O_sativa_Os01g0286900_NP_001042778	-----R-----R---
O_sativa_Os02g0723400_NP_001047972	-----VHIDGN---NP-----S---
A_lyrata_XP_002885218	-----S---PQ---RE-----AR---
aAtIAA31_At3g17600	-----S---PQ---RE-----AR---
O_sativa_Os1g0221300_NP_001067526	-----MK-----MK---
A_lyrata_XP_002875064	-----QPSYRS---IT-----QLK---
aAtIAA32_MEE10_At2g01200	-----PSYNS---IT-----QLK---
aAtIAA34_At1g15050	-----
A_lyrata_XP_002892847	-----
P_trichocarpa_XP_002314837	-----
A_lyrata_XP_002869489	-----KRTADS---MA-----ATSG---
aAtIAA11_At4g28640	-----KRTADS---MA-----ATSG---
P_trichocarpa_XP_002303110	-----KRAADS---VS-----ASNG---
O_sativa_Os02g0817600_NP_001048522	-----KRAEGP---TA-----TTSPGT
A_lyrata_XP_002889491	-----YAAAS---NA-----TRQ---
aAtIAA10_At1g04100	-----PAAAS---NA-----TRQ---
A_lyrata_XP_002881274	-----SHAGAS---PP-----RSSS---
aAtIAA13_At2g33310	-----SHAGSS---PP-----RSSS---
A_lyrata_XP_002889513	-----SHQGAS---PP-----RSS---
aAtIAA12_BDL_At1g04550	-----SHQGAS---PP-----RSS---
P_trichocarpa_XP_002311698	-----SHEGGS---PT-----AGS---
P_trichocarpa_XP_002314509	-----SHEGGS---PT-----AGS---
A_lyrata_XP_002885143	-----NKTTY---VP-----HISHK---
aAtIAA26_At3g16500	-----NKTTT---VP-----HISQK---
A_lyrata_XP_002891672	-----STKT-----TSHK---
aAtIAA18_At1g51950	-----STKT-----TSHK---
O_sativa_Os02g0228900_NP_001046357	-----NNALAS---NN-N-----GCFQT---
P_trichocarpa_XP_002309532	-----
P_trichocarpa_XP_002324753	-----TDEKQY---KN-----
P_trichocarpa_XP_002303315	QSLPVMDEKESQPCCTKVVVELPQCAEKKAF---STPAP-----ANTAVPNSSQK---
O_sativa_Os01g0741900_NP_001044208	EMIAAVS-----ERKKGC---CPPPPPHGAPATPARNRPOTQG---
O_sativa_Os05g0523300_NP_001056086	DENMAG-----ERKKGC---CPSP-----PCSAAAHSSNPQG---
O_sativa_Os01g0190300_NP_001042263	-----PSG---
A_lyrata_XP_002872184	-----
aAtIAA28_At5g25890	-----
O_sativa_Os08g0109400_NP_001060811	-----NRAASS-----
P_patens_IAA1A_BAB71765	-----DCANRKGWVAVSPVQPP-----PAQ---
P_patens_IAA1B_BAB71766	-----DCANRKGWVAVSPVQPP-----PAQ---
P_patens_XP_001765051	-----DVINRNKAIAPASNEQP-----LAQ---
A_lyrata_XP_002882951	-----GDVEKVNDSV-----AAK---
aAtIAA19_MSG2_At3g15540	-----GDAEKVNDSV-----AAK---

A_lyrata_XP_002894404	-----ED-ES--LP-----VVK---
aAtIAA6_SHY1_At1g52830	-----ED-ES--LP-----VVK---
P_trichocarpa_XP_002299626	-----TDGRK--T-----QTT---
P_trichocarpa_XP_002304179	-----TDDRK--V-----QTK---
A_lyrata_XP_002892874	-----E--P-----ATK---
aAtIAA5_At1g15580	-----E--P-----AKK---
A_lyrata_XP_002887832	-----NTAK--PP-----AAK---
aAtIAA15_At1g80390	-----PP-----APK---
P_trichocarpa_XP_002299625	-----PP-----SPK---
O_sativa_Os01g0178500_NP_001042192	-----PP-----SPK---
O_sativa_Os05g0178600_NP_001054800	-----HDAVEA--APP-----VAK---
O_sativa_Os06g0597000_NP_001057986	-----AKIKPA--A-----AAK---
O_sativa_Os03g0633800_NP_001050714	-----EDGASP--A-----SK---
O_sativa_Os12g0601400_NP_001067210	-----HDDDTA--AP-----AK---
O_sativa_Os03g0797800_NP_001051565	-----NSEGDD--AP-----PAK---
O_sativa_Os07g0182400_NP_001059051	-----NGERDS--AP-----PAK---
P_trichocarpa_XP_002300804	-----SHDQET--AP-----PIK---
P_trichocarpa_XP_002307625	-----SHEQET--AP-----PTK---
P_trichocarpa_XP_002319642	-----DQETAS--APNTYSFDM-----HATCR---
P_trichocarpa_XP_002328339	-----DQETAP--AP-----K---
P_trichocarpa_XP_002312567	-----EESA--LP-----PAK---
P_trichocarpa_XP_002314656	-----EESA--PP-----PAK---
A_lyrata_XP_002870306	-----EES--TP-----PTK---
aAtIAA1_AXR5_At4g14560	-----EES--TP-----PTK---
A_lyrata_XP_002885542	-----EES--TP-----PTK---
aAtIAA2_At3g23030	-----KNET--AS-----PPK---
A_lyrata_XP_002865407	-----KTET--AS-----PPK---
aAtIAA4_At5g43700	-----KTET--SP-----PRK---
A_lyrata_XP_002892202	-----KTET--SP-----PRK---
aAtIAA3_SHY2_At1g04240	-----KTEASCCSVLMVSFLD---SG-----IFR---
A_lyrata_XP_002864971	-----TFL--KDPSK--PP-----A-K---
O_sativa_Os090527700_NP_001063732	-----TFL--KDPSK--PP-----A-K---
A_lyrata_XP_002868277	-----TTL--KDPSK--PP-----T-K---
aAtIAA14_SLR_At4g14550	-----TTL--KDPSK--PP-----A-K---
A_lyrata_XP_002883395	-----TTL--KDPSK--PP-----A-K---
aAtIAA7_AXR2_At3g23050	-----PAVTI--KDDPAK--PP-----A-K---
P_trichocarpa_XP_002311658	-----SSCP--KDDPAK--PP-----S-K---
A_lyrata_XP_002889499	-----SACP--KDDPAK--PP-----A-K---
aAtIAA17_AXR3_At1g04250	-----VVK--PP-----A-K---
A_lyrata_XP_002884465	-----VVK--PP-----A-K---
aAtIAA16_At3g04730	-----LLA--TDDPAK--PP-----A-K---
P_trichocarpa_XP_002302075	-----VAP-RPNDPAK--PP-----S-K---
P_trichocarpa_XP_002328494	-----VAPPASTDDPAK--PP-----A-K---
P_trichocarpa_XP_002319075	-----LLA--TDDPAK--PP-----A-K---
P_trichocarpa_XP_002306817	-----QSSVVTAEPDPAK--PR-----APK---
O_sativa_Os03g0633500_NP_001050713	-----QSSVVTAADPEK--PR-----APK---
O_sativa_Os12g0601300_NP_001067209	-----PAEAAAADAEEK--PP-----APK---
O_sativa_Os03g0742900_NP_001051230	-----AAPAAA--PP-----AAK---
O_sativa_Os01g0675700_NP_001043847	-----EAAAGA--PR-----AAK---
O_sativa_Os05g0559400_NP_001056300	-----KVAAPP--QP-----AAK---
O_sativa_Os01g0231000_NP_001042495	-----KK--AQ--AP-----AAK---
O_sativa_Os06g0335500_NP_001057554	-----EN--SS--AP-----AAK---
P_trichocarpa_XP_002298231	-----EN--SS--AP-----AAK---
P_trichocarpa_XP_002303297	-----TNGHGA--AP-----ASK---
P_trichocarpa_XP_002331172	-----KKSSAT--AP-----ASK---
A_lyrata_XP_002867425	-----KKSSAT--AP-----ASK---
aAtIAA27_PAP2_At4g29080	-----LNN--AP-----AAK---
aAtIAA8_At2g22670	-----TNNSSS--PP-----AAK---
aAtIAA9_At5g65670	-----TNNSSS--PP-----AAK---
A_lyrata_XP_002864969	-----LNN--AP-----AAK---
A_lyrata_XP_002878628	-----LNN--AP-----AAK---
A_lyrata_XP_002862301	-----TNNSSS--PP-----AAK---
P_trichocarpa_XP_002302351	-----SSANNSS--AP-----APK---

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aAtIAA29_At4g32280	-----EVVGWPPP-VKTCMIKYGSYHHRHIRNHHHCOPYHHRGRITAMNNNISNP--
P_trichocarpa_XP_002308067	-----GIVGWPP I-K-FKRRK-----LSRQNSRVLEVN-----
P_trichocarpa_XP_002324639	-----WIVGWPP I-K-FKRRK-----LSRQSSRALEIN-----
P_trichocarpa_XP_002309635	-----QVVGWPP I-KSWRKKV-----LHHQHQAQGHVVNS-----
P_trichocarpa_XP_002308855	-----SCVDESGFLQ--SSENVQVNPNS-----
P_trichocarpa_XP_002307573	-----SCVDESGFLQ--SSENVQVNPNS-----
O_sativa_Os02g0141100_NP_001045857	SAINDGAFLNKNSWP-----AAPLLQR-----

O_sativa_Os02g0805100_NP_001048437	-----TVVGWPPV-SS--ARR-----
O_sativa_Os06g0166500_NP_001056915	-----KLVGWPPV-KCLHRRR-----
A_lyrata_XP_002864517	-----SVV--PPV-T-----
P_trichocarpa_XP_002324470	-----TMI--PPV-T-----
O_sativa_Os04g0653300_NP_001054106	-----GVV--PPV-T-----
A_lyrata_XP_002878437	-----HEYDGV-GAAEE---M-----MIMEEEDQ-----
aAtIAA33_At5g57420	-----SVV--PPV-T-----
aAtIAA30_At3g62100	-----HEYDGV-GAAEE---M-----MIMEEEEEQ-----
A_lyrata_XP_002880275	-----YGYSVA-APAAE-----EEEE-----
aAtIAA20_At2g46990	-----YGYSVA-APAVEDAEYV-----AAVEEEEE-----
P_trichocarpa_XP_002302809	-----LLDWPPV-KPSPG-----KAVTSEE-----
P_trichocarpa_XP_002320253	-----QLSDWPPV-KPFLR-----KALASEE-----
O_sativa_Os01g0286900_NP_001042778	-----RPPS-----
O_sativa_Os02g0723400_NP_001047972	-----TPRSSL-TTATV-----TADRGGGG-----
A_lyrata_XP_002885218	-----QDWPPV-KSRLR-----DTLKGRRL-----
aAtIAA31_At3g17600	-----QDWPPV-KSRLR-----DTLKGRRL-----
O_sativa_Os11g0221300_NP_001067526	-----DRNASAEVVKPGLSPS-----
A_lyrata_XP_002875064	-----SEDTGHKRLAHGYNNEEE-----
aAtIAA32_MEE10_At2g01200	-----SEDTGHQRLAQGYNNEGE-----
aAtIAA34_At1g15050	-----SG-QR---YCSNEG-----
A_lyrata_XP_002892847	-----SG-QK---YCSNEG-----
P_trichocarpa_XP_002314837	-----SG-HR---MPLAEGVQ-----
A_lyrata_XP_002869489	-----QVVGWPPV-RTYRMNSMVN-----QAKASATEDPN-----
aAtIAA11_At4g28640	-----QVVGWPPV-RTYRMNSMVN-----QAKASATEDPN-----
P_trichocarpa_XP_002303110	-----AASSQVVGWPPV-RSHRMHIMVN-----QAKSQATEEFNSMNR-----
O_sativa_Os02g0817600_NP_001048522	VASGHPHSFGVVGWPPV-RQFRMNSLFN-----QAKENTSETDTKK-----
A_lyrata_XP_002889491	-----VAVGWPPV-RTYRINSLVN-----QAKSLATEGGLS-----
aAtIAA10_At1g04100	-----VAVGWPPV-RTYRINSLVN-----QAKSLATEGGLS-----
A_lyrata_XP_002881274	-----QVVGWPPV-GSHRMNSLVNN-----QATKSAREEEEEAG-----
aAtIAA13_At2g33310	-----QVVGWPPV-GSHRMNSLVNN-----QATKSAREEEEEAG-----
A_lyrata_XP_002889513	-----QVVGWPPV-GSHRMNSLVNN-----QAMKAARAEEDGEGE-----
aAtIAA12_BDL_At1g04550	-----QVVGWPPV-GLHRMNSLVNN-----QAMKAARAEEDGEGE-----
P_trichocarpa_XP_002311698	-----QVVGWPPV-RAYRMNSLVN-----QAKAARAEEDKGIGE-----
P_trichocarpa_XP_002314509	-----QVVGWPPV-RAYRMNSLVS-----QAKAARAEEDKGIGE-----
A_lyrata_XP_002885143	-----RTAPGPVVGWPPV-RSFRKNLASTS-----SSKLGNESSLHGG-----
aAtIAA26_At3g16500	-----RTAPGPVVGWPPV-RSFRKNLASTS-----SSKLGNESS-HGG-----
A_lyrata_XP_002891672	-----RTAPGPVVGWPPV-RSFRKNLANGS-----SSKLGNDSTTSNGVVF-----
aAtIAA18_At1g51950	-----RTAPGPVVGWPPV-RSFRKNLANGS-----SSKLGNDSTTSNGVVF-----
O_sativa_Os02g0228900_NP_001046357	-----RSPSTPVVGWPPV-RTFRRNLATSS-----KASL-----
P_trichocarpa_XP_002309532	-----ATVVGWPPV-RSFRKNIASSS-----TSKMVSELP-----
P_trichocarpa_XP_002324753	-----RAALAPVVGWPPV-RSFRKNLAGSS-----TPKLVSESR-----
P_trichocarpa_XP_002303315	-----RIAPGPVVGWPPV-RSFRKNLATS-----SGSN-----
O_sativa_Os01g0741900_NP_001044208	-----RGAAAPVVGWPPV-RSFRRNLAASSS-----SSK--HSP-----
O_sativa_Os05g0523300_NP_001056086	-----RGAIPVVGWPPV-RSFRRNLTNGS-----SFK--QSP-----
O_sativa_Os01g0190300_NP_001042263	-----AAAAAPVVGWPPV-RSFRRNLAASSS-----SSSKQAPPPSS-----
A_lyrata_XP_002872184	-----KVEVAPVVGWPPV-RSSRRNLTAQ-----
aAtIAA28_At5g25890	-----RVEVAPVVGWPPV-RSSRRNLTAQ-----
O_sativa_Os08g0109400_NP_001060811	-----AQLVGWPPV-RAFRRKNSLTPKPADADLMN-----KVKLCSDEGHGSR-----
P_patens_IAA1A_BAB71765	-----NQTVGWPPV-KNFNMNTTAP-----PASTPARACPSV-----
P_patens_IAA1B_BAB71766	-----NQTVGWPPV-KNFNMNTTAP-----PASTPARACPSV-----
P_patens_XP_001765051	-----NQTVGWPPV-KNFNMNTTAP-----PPSAPATACRSVP-----M
A_lyrata_XP_002882951	-----SQVVGWPPV-CSYRKNNSCKE-----AA---T-----
aAtIAA19_MSG2_At3g15540	-----SQVVGWPPV-CSYRKNNSCKE-----AS---T-----
A_lyrata_XP_002894404	-----SQAVGWPPV-CSYRRQKNNEE-----AS---K-----
aAtIAA6_SHY1_At1g52830	-----SQAVGWPPV-CSYRRKKNNEE-----AS---K-----
P_trichocarpa_XP_002299626	-----SQVVGWPPV-CSYRKNNSFNE-----KD---S-----
P_trichocarpa_XP_002304179	-----SQVVGWPPV-CSYRKNISFNE-----RDR---H-----
A_lyrata_XP_002892874	-----SQVVGWPPV-CSYRRKNSLEQ-----TK-----
aAtIAA5_At1g15580	-----SQVVGWPPV-CSYRRKNSLER-----TK-----
A_lyrata_XP_002887832	-----DQLVGWPPV-TTARKTVRR-----
aAtIAA15_At1g80390	-----DQLVGWPPV-ATARKTVRR-----
P_trichocarpa_XP_002299625	-----AQVVGWPPV-RAYRKNAMKS-----
O_sativa_Os01g0178500_NP_001042192	-----ARVVGWPPV-RSFRKNALA-----
O_sativa_Os05g0178600_NP_001054800	-----ARVVGWPPV-RAFRRKNALAL-----AA---A-----
O_sativa_Os06g0597000_NP_001057986	-----ARAVGWPPV-RAYRRNALRE-----
O_sativa_Os03g0633800_NP_001050714	-----AQVVGWPPV-RSYRKSCFQQ-----SA---AAS-----
O_sativa_Os12g0601400_NP_001067210	-----AQVVGWPPV-RSYRKSCLOP-----TT---TTT-----
O_sativa_Os03g0797800_NP_001051565	-----QVVGWPPV-GSYRRSTFQSS-----SS---STA-----
O_sativa_Os07g0182400_NP_001059051	-----AQVVGWPPV-RAYRRNTFHQA-----AA---AAA-----
P_trichocarpa_XP_002300804	-----AQVVGWPPV-RSYRKNCLQPK-----KN---DR-----
P_trichocarpa_XP_002307625	-----AQVVGWPPV-RSYRKNCLQPK-----KN---DQ-----
P_trichocarpa_XP_002319642	-----AQVVGWPPV-RSYRKNCLQAK-----KL---EA-----
P_trichocarpa_XP_002328339	-----TQVVGWPPV-RSYRKNCLQAR-----KL---EA-----

P_trichocarpa_XP_002312567	-----VQIVGWPPV-RSYRKNLQPK-----	KA	ED
P_trichocarpa_XP_002314656	-----AQIVGWPPV-RSYRKNLQPK-----	KA	EA
A_lyrata_XP_002870306	-----TQIVGWPPV-RSNRKN--NNN-----	KN	VS
aAtIAA1_AXR5_At4g14560	-----TQIVGWPPV-RSNRKN--NNN-----	KN	VS
A_lyrata_XP_002885542	-----TQIVGWPPV-RSSRKN--NNS-----		VS
aAtIAA2_At3g23030	-----TQIVGWPPV-RSSRKN--NNS-----		VS
A_lyrata_XP_002865407	-----AQIVGWPPV-RSYRKNNIQTK-----	KN	ES
aAtIAA4_At5g43700	-----AQIVGWPPV-RSYRKNNVQTK-----	KS	ES
A_lyrata_XP_002892202	-----AQIVGWPPV-RSYRKNNIQTK-----	KN	ESE
aAtIAA3_SHY2_At1g04240	-----AQIVGWPPV-RSYRKNNIQSK-----	KN	ESE
A_lyrata_XP_002864971	-----AQIVGWPPV-RSYRKNLQPK-----	CK	N
O_sativa_Os090527700_NP_001063732	-----GHPVP-SSSMIQAAV-----		
A_lyrata_XP_002868277	-----AQVVGWPPV-RNYRKNVMAVQ-----	KS	G-E
aAtIAA14_SLR_At4g14550	-----AQVVGWPPV-RNYRKNVMAVQ-----	KS	G-E
A_lyrata_XP_002883395	-----AQVVGWPPV-RNYRKNMMTQQ-----	KT	S-G
aAtIAA7_AXR2_At3g23050	-----AQVVGWPPV-RNYRKNMMTQQ-----	KT	SSG
P_trichocarpa_XP_002311658	-----AQVVGWPPV-RSYRKNVMAQK-----	NA	SEE
A_lyrata_XP_002889499	-----AQVVGWPPV-RSYRKNVMVSC-----	QK	S
aAtIAA17_AXR3_At1g04250	-----AQVVGWPPV-RSYRKNVMVSC-----	QK	S
A_lyrata_XP_002884465	-----AQVVGWPPV-RSFRKNVMSGQ-----	KP	T
aAtIAA16_At3g04730	-----AQVVGWPPV-RSFRKNVMSGQ-----	KP	T
P_trichocarpa_XP_002302075	-----AQVVGWPPV-RSFRKNMLAVQ-----	KS	S
P_trichocarpa_XP_002328494	-----AQVVGWPPV-RSFRKNMLAVQ-----	KN	S
P_trichocarpa_XP_002319075	-----AQVVGWPPV-RSFRKNMLAVQ-----	KN	S
P_trichocarpa_XP_002306817	-----AQVVGWPPV-RSFRKNMLAVQ-----	KS	S
O_sativa_Os03g0633500_NP_001050713	-----AQVVGWPPV-RSFRKNVLAEK-----	CK	
O_sativa_Os12g0601300_NP_001067209	-----AQVVGWPPV-RSYRKNILAVQ-----	AD	KGK
O_sativa_Os03g0742900_NP_001051230	-----AQVVGWPPV-RSFRKNIMTVQ-----	SV	KSK
O_sativa_Os01g0675700_NP_001043847	-----AQVVGWPPV-RNYRKNLTAAS-----	ASK	GKG
O_sativa_Os05g0559400_NP_001056300	-----AQVVGWPPV-RSYRKNLTAAS-----	ATK	TKG
O_sativa_Os01g0231000_NP_001042495	-----AQVVGWPPV-RSYRKNLTAAS-----	QIK	SNK
O_sativa_Os06g0335500_NP_001057554	-----AQVVGWPPV-RSYRKNLTAAS-----	QPALKGKD	
P_trichocarpa_XP_002298231	-----TQVVGWPPV-RSFRKNLTAAS-----	LAK	NN
P_trichocarpa_XP_002303297	-----AQVVGWPPV-RSFRKNLTAAS-----	LAK	NN
P_trichocarpa_XP_002331172	-----AQVVGWPPV-RSFRKNLTAAS-----	LAK	NN
A_lyrata_XP_002867425	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
aAtIAA27_PAP2_At4g29080	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
aAtIAA8_At2g22670	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
aAtIAA9_At5g65670	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
A_lyrata_XP_002864969	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
A_lyrata_XP_002878628	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
A_lyrata_XP_002862301	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND
P_trichocarpa_XP_002302351	-----AQVVGWPPV-RSFRKNLTAAS-----	LSK	ND

[600]

aAtIAA29_At4g32280
P_trichocarpa_XP_002308067
P_trichocarpa_XP_002324639
P_trichocarpa_XP_002309635
P_trichocarpa_XP_002300855
P_trichocarpa_XP_002307573
O_sativa_Os02g0141100_NP_001045857
O_sativa_Os02g0805100_NP_001048437
O_sativa_Os06g0166500_NP_001056915
A_lyrata_XP_002864517
P_trichocarpa_XP_002324470
O_sativa_Os04g0653300_NP_001054106
A_lyrata_XP_002878437
aAtIAA33_At5g57420
aAtIAA30_At3g62100
A_lyrata_XP_002880275
aAtIAA20_At2g46990
P_trichocarpa_XP_002302809
P_trichocarpa_XP_002320253
O_sativa_Os01g0286900_NP_001042778
O_sativa_Os02g0723400_NP_001047972
A_lyrata_XP_002885218
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O_sativa_Os11g0221300_NP_001067526
A_lyrata_XP_002875064
aAtIAA32_MEE10_At2g01200
aAtIAA34_At1g15050

TTATVGSSSSSSISSRS-----	SMYV
-RAVDNGCEDCQARSSN-----	SMYI
-RAVDNGYEDCQARTSK-----	YMYI
TRMATAGNYEYGTG-SN-----	SKYV
-----	TRTFV
-----	TRTFV
-----	MRTFT
-----	YV
-----ACGGAN-----	YV
-----DGGCGGG-----	YV

-----NECNSVG-----	SFYV

-----NECNSVG-----	SFYV
-----NECHSVG-----	SFYV
-----NECNSVG-----	SFYV
-----NECCSS-----	TLFV
-----NECSSA-----	TLFV
-----GGARRRR-----	TLFV
-----GGHRRRR-----	SLFV
-----LRRGDDT-----	SLFV
-----LRRGDDT-----	SLFV
-----	RFV
-----SRGK-----	YAYV
-----SRGK-----	YAYV
-----YRRK-----	WGYV

A_lyrata_XP_002892847	-----YRRN-----	WGYV
P_trichocarpa_XP_002314837	-----SKDR-----	WAYV
A_lyrata_XP_002869489	-----LEIRQEV-NKNR-----	TDATKMRN-----SMFV
aAtIAA11_At4g28640	-----LEISQAV-NKNR-----	SDSTKMRN-----SMFV
P_trichocarpa_XP_002303110	-----KNAVEEKVGNKNIN-----	IGNTKTRT-----SLFV
O_sativa_Os02g0817600_NP_001048522	-----TATNESDVQKDKE-----	EGEKKGR-----VAGWV
A_lyrata_XP_002889491	-----SDIQKDTVKNSVVAAK-----	NDDVCFIKSTR-----TSMLV
aAtIAA10_At1g04100	-----SGIQKETTKSVVVAAK-----	NDDACFIKSSR-----TSMLV
A_lyrata_XP_002881274	-----KKIVKDDEPKDVT-----	KKVNGKVP-----VGFI
aAtIAA13_At2g33310	-----KKVKDDEPKDVT-----	KKVNGKVQ-----VGFI
A_lyrata_XP_002889513	-----KKVAKNDELKDVS-----	MKVNGKVQG-----LGFV
aAtIAA12_BDL_At1g04550	-----KKVKNDELKDVS-----	MKVNPKVQG-----LGFV
P_trichocarpa_XP_002311698	-----KDISKDNLKKKICNG-----	NKTSAPSNEKG-----HLGFV
P_trichocarpa_XP_002314509	-----KDKSKENLKKKICNG-----	NKTNATGNEKG-----HLGFV
A_lyrata_XP_002885143	-----QINKSDDGKQVETKKEG-----	MFV
aAtIAA26_At3g16500	-----QINKSDDGKQVETKKEG-----	MFV
A_lyrata_XP_002891672	-----LKNQKDDDDVKTMEPKRQGG-----	MFV
aAtIAA18_At1g51950	-----LKNQKCDAAAKTEPKRQGG-----	MFV
O_sativa_Os02g0228900_NP_001046357	-----ELQNGKKAAKAEEIKRAP-----	FI
P_trichocarpa_XP_002309532	-----NKTSEEGSSLKPDSEFRND-----	LFV
P_trichocarpa_XP_002324753	-----NKPPKEGSSLKPDSEFRND-----	LFV
P_trichocarpa_XP_002303315	-----SKPTFESQNKPAETCKKG-----	LFV
O_sativa_Os01g0741900_NP_001044208	-----EPQNDNANAKVTLTCKKN-----	PLV
O_sativa_Os05g0523300_NP_001056086	-----ERQNDDEADDKAKPICCKR-----	PLV
O_sativa_Os01g0190300_NP_001042263	-----SPQNGDKASKDGGAEKG-----	MFV
A_lyrata_XP_002872184	-----LKEEMKKRESDEEKE-----	LYV
aAtIAA28_At5g25890	-----LKEEMKKRESDEEKE-----	LYV
O_sativa_Os08g0109400_NP_001060811	-----CAAQERRSSS-----	TMFV
P_patens_IAA1A_BAB71765	-----QRKGAS-----	TSSSG-----NLV
P_patens_IAA1B_BAB71766	-----QRKGAS-----	TSSSG-----NLV
P_patens_XP_001765051	-----PRRGAS-----	SSSSG-----NLV
A_lyrata_XP_002882951	-----TKV-----	GLG-----YV
aAtIAA19_MSG2_At3g15540	-----TKV-----	GLG-----YV
A_lyrata_XP_002894404	-----HET-----	ATG-----YV
aAtIAA6_SHY1_At1g52830	-----HET-----	ATG-----YV
P_trichocarpa_XP_002299626	-----HET-----	SKI-----YV
P_trichocarpa_XP_002304179	-----HET-----	SKI-----YV
A_lyrata_XP_002892874	-----SS-----	SS-----YV
aAtIAA5_At1g15580	-----SS-----	SS-----YV
A_lyrata_XP_002887832	-----C-----	KYV
aAtIAA15_At1g80390	-----C-----	KYV
P_trichocarpa_XP_002299625	-----A-----	KYV
O_sativa_Os01g0178500_NP_001042192	-----SSSKA-----	KFV
O_sativa_Os05g0178600_NP_001054800	-----SSSKA-----	KFV
O_sativa_Os06g0597000_NP_001057986	-----DSARA-----	KLV
O_sativa_Os03g0633800_NP_001050714	-----KSKAAVSSCENNKEPITKNAAPAPAASSAAAANGG-----	SLV
O_sativa_Os12g0601400_NP_001067210	-----KSK-----	PPAAAAAETQKEDVAGAGG-----LFV
O_sativa_Os03g0797800_NP_001051565	-----AAA-----	K--GKGGGETDQGRKNKGGG-----LYV
O_sativa_Os07g0182400_NP_001059051	-----ATK-----	K--G--GDEKQKQQQGGG-----LYV
P_trichocarpa_XP_002300804	-----VDG-----	AG-----MYV
P_trichocarpa_XP_002307625	-----VDG-----	AG-----MYV
P_trichocarpa_XP_002319642	-----EA-----	AG-----LYV
P_trichocarpa_XP_002328339	-----EA-----	AG-----LYV
P_trichocarpa_XP_002312567	-----EAA-----	AG-----MYV
P_trichocarpa_XP_002314656	-----EAA-----	AG-----MYV
A_lyrata_XP_002870306	-----EG-----	QG-----NYV
aAtIAA1_AXR5_At4g14560	-----EG-----	QG-----NYV
A_lyrata_XP_002885542	-----HEG-----	QG-----IYV
aAtIAA2_At3g23030	-----HEG-----	QG-----IYV
A_lyrata_XP_002865407	-----SDEV-----	GRPGP-----GAMFV
aAtIAA4_At5g43700	-----SDEV-----	GRPGP-----GAMFV
A_lyrata_XP_002892202	-----AEEAMS-----	SGGGTVA-----FV
aAtIAA3_SHY2_At1g04240	-----AEEAMS-----	SGGGTVA-----FV
A_lyrata_XP_002864971	-----VEEASSEK-----	AGSGGGGAAG-----AGLV
O_sativa_Os090527700_NP_001063732	-----VEEASSEK-----	AGNFGGGAAG-----AGLV
A_lyrata_XP_002868277	-----GKAST-----	GGSSAA-----FV
aAtIAA14_SLR_At4g14550	-----S-----	GGPEAAA-----FV
A_lyrata_XP_002883395	-----S-----	GGPEAAA-----FV
aAtIAA7_AXR2_At3g23050	-----TGATVGN-----	DKTSGSSGATSSASVCAAVAYV
P_trichocarpa_XP_002311658		
A_lyrata_XP_002889499		
aAtIAA17_AXR3_At1g04250		
A_lyrata_XP_002884465		

aAtIAA15_At1g80390
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O_sativa_Os01g0178500_NP_001042192
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P_trichocarpa_XP_002328494
P_trichocarpa_XP_002319075
P_trichocarpa_XP_002306817
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O_sativa_Os12g0601300_NP_001067209
O_sativa_Os03g0742900_NP_001051230
O_sativa_Os01g0675700_NP_001043847
O_sativa_Os05g0559400_NP_001056300
O_sativa_Os01g0231000_NP_001042495
O_sativa_Os06g0335500_NP_001057554
P_trichocarpa_XP_002298231
P_trichocarpa_XP_002303297
P_trichocarpa_XP_002331172
A_lyrata_XP_002867425
aAtIAA27_PAP2_At4g29080
aAtIAA8_At2g22670
aAtIAA9_At5g65670
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A_lyrata_XP_002878628
A_lyrata_XP_002862301
P_trichocarpa_XP_002302351

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P_trichocarpa_XP_002324639
P_trichocarpa_XP_002309635
P_trichocarpa_XP_002300855
P_trichocarpa_XP_002307573
O_sativa_Os02g0141100_NP_001045857
O_sativa_Os02g0805100_NP_001048437
O_sativa_Os06g0166500_NP_001056915
A_lyrata_XP_002864517
P_trichocarpa_XP_002324470
O_sativa_Os04g0653300_NP_001054106
A_lyrata_XP_002878437
aAtIAA33_At5g57420

--VTE----LERKG---EFVATYEDKDGDLMLVGDVPWMMFVESCRRMLMKTGDAIGL-
RTIME----QEVNNGV---EYVPTYEDKDGDWMLVGDVPWKMVFVESCRRRLMKSSEATGFA
RKLVD----AVNGT---EYVPTYEDKDGDWMLVGDVPWKMVFVETCQRLRLMKSSEAVNLA
MKLVD----AVSGN---EYVPTYEDKDGDWMLVGDVPWKMVFVETCQRLRLMKSSEAVNLA
TKLVD----LVFGA---EYVPTYEDKDGDWMLVGDVPWKMVFVESCRRRLMKSSEAVNLS
-----ANPS---EFAITYQDKDGLMLVGDVPFDMFTSTCKKRLRIMKRSEATGLG
-----VNPS---DFAVTYEDKDGDLMLVGDVPFEMFISTCKKRLRIMKGSEARGLG
-----ASAA---HFAVAYEDKDGDLMLAGDVPWDMFVSSCKKRLRIMGSEAR---
-----CSDG---QFAIAYEDKDGDLMLVGDVPWEMFVSSCKKRLRIMKGSEAR---
-----YNGS---DFAPTYEDKDGDWMLVGDVPWDMFVSTCKKRLRIMKGSEARGLG
-----YNGS---EFAPTYEDKDGDWMLVGDVPWDMFVSSCKKRLRIMKGSEARGLG
-----YNGS---EHVPTYEDKDGDWMLVGDVPWDMFVNSCKKRLRIMKSEARGLG
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721

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