

Additional file 3. Information about the sequences used in the phylogenetic trees.

A. I1 Kazal sequences.

Protein	Organism	Gene model
AtKaz-1	<i>Arabidopsis thaliana</i>	AT4G01575.1
AtKaz-2	<i>Arabidopsis thaliana</i>	AT3G61980.1
CsKaz-1	<i>Cucumis sativus</i>	Cucsa.174730.1
FvKaz-1	<i>Fragaria vesca</i>	mrna12428.1-v1.0-hybrid
FvKaz-2	<i>Fragaria vesca</i>	mrna21627.1-v1.0-hybrid
GmKaz-1	<i>Glycine max</i>	Glyma14g36800.1
GmKaz-2	<i>Glycine max</i>	Glyma02g38630.1
GmKaz-3	<i>Glycine max</i>	Glyma04g40413.1
MtKaz-1	<i>Medicago truncatula</i>	Medtr3g093240.1
MtKaz-2	<i>Medicago truncatula</i>	Medtr5g068760.1
MgKaz-1	<i>Mimulus guttatus</i>	mgv1a025397m
PtKaz-1	<i>Populus trichocarpa</i>	Potri.015G001800.1
PtKaz-2	<i>Populus trichocarpa</i>	Potri.002G182800.1
PtKaz-3	<i>Populus trichocarpa</i>	Potri.014G109000.1
PtKaz-4	<i>Populus trichocarpa</i>	Potri.014G108900.1
PtKaz-5	<i>Populus trichocarpa</i>	Potri.014G108800.1
PtKaz-6	<i>Populus trichocarpa</i>	Potri.014G108700.1
PtKaz-7	<i>Populus trichocarpa</i>	Potri.014G108600.1
PpeKaz-1	<i>Prunus persica</i>	ppa014626m
PpeKaz-2	<i>Prunus persica</i>	ppa013184m
RcKaz-1	<i>Ricinus communis</i>	30154.m001128_RICCO
RcKaz-2	<i>Ricinus communis</i>	30076.m004498_RICCO
RcKaz-3	<i>Ricinus communis</i>	30076.m004499_RICCO
RcKaz-4	<i>Ricinus communis</i>	30076.m004497_RICCO
RcKaz-5	<i>Ricinus communis</i>	30076.m004496_RICCO
TcKaz-1	<i>Theobroma cacao</i>	Thecc1EG005000t1
TcKaz-2	<i>Theobroma cacao</i>	Thecc1EG015543t1
VvKaz-1	<i>Vitis vinifera</i>	GSVIVP00037147001_VITVI
BdKaz-1	<i>Brachypodium distachyon</i>	Bradi2g52990.1_BRADI
OsKaz-1	<i>Oryza sativa</i>	LOC_Os01g59610.1
SbKaz-1	<i>Sorghum bicolor</i>	Sb03g037650.1
ZmKaz-1	<i>Zea mays</i>	GRMZM2G144936_T01
ZmKaz-2	<i>Zea mays</i>	GRMZM2G028266_T01
ZmKaz-3	<i>Zea mays</i>	GRMZM2G324806_T01
SmKaz-1	<i>Selaginella moellendorffii</i>	414607
PpKaz-1	<i>Physcomitrella patens</i>	Pp1s80_198V6.2
PpKaz-2	<i>Physcomitrella patens</i>	Pp1s70_36V6.1
PpKaz-3	<i>Physcomitrella patens</i>	Pp1s227_63V6.1
PpKaz-4	<i>Physcomitrella patens</i>	Pp1s288_41V6.1
CrKaz-3	<i>Chlamydomonas reinhardtii</i>	Cre07.g329500.t2.1a
CrKaz-3	<i>Chlamydomonas reinhardtii</i>	Cre07.g329500.t2.1b
CrKaz-3	<i>Chlamydomonas reinhardtii</i>	Cre06.g267750.t1.2a
CsuKaz-1	<i>Coccomyxa subellipsoidea</i>	Ext_fgenes1_pg.C_80144 47526

VcKaz-2	<i>Volvox carteri</i>	Vocar20000301m.a
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B. I3 Kunitz-P sequences.

Protein	Organism	Gene model
MtKun-1a	<i>Medicago truncatula</i>	Medtr3g106580.1a
MtKun-1b	<i>Medicago truncatula</i>	Medtr3g106580.1b
MtKun-2	<i>Medicago truncatula</i>	Medtr3g014820.1
MtKun-3	<i>Medicago truncatula</i>	Medtr3g014870.1
MtKun-4	<i>Medicago truncatula</i>	Medtr3g106620.1
MtKun-5	<i>Medicago truncatula</i>	Medtr7g037410.1
MtKun-6	<i>Medicago truncatula</i>	Medtr6g078290.1
MtKun-7	<i>Medicago truncatula</i>	Medtr6g059790.1
MtKun-8	<i>Medicago truncatula</i>	Medtr6g078250.1
MtKun-9	<i>Medicago truncatula</i>	Medtr6g044810.1
MtKun-10	<i>Medicago truncatula</i>	Medtr6g078260.1
MtKun-11	<i>Medicago truncatula</i>	Medtr6g059760.1b
MtKun-12	<i>Medicago truncatula</i>	Medtr6g078120.1
MtKun-13	<i>Medicago truncatula</i>	Medtr6g078070.1
MtKun-14	<i>Medicago truncatula</i>	Medtr6g044780.1
MtKun-15	<i>Medicago truncatula</i>	Medtr6g065460.1
MtKun-16	<i>Medicago truncatula</i>	Medtr6g059650.1
MtKun-17	<i>Medicago truncatula</i>	Medtr6g009650.1
MtKun-18	<i>Medicago truncatula</i>	Medtr6g078280.1
MtKun-19	<i>Medicago truncatula</i>	Medtr6g059810.1
MtKun-20	<i>Medicago truncatula</i>	Medtr6g059530.1
MtKun-21	<i>Medicago truncatula</i>	Medtr6g078140.1
MtKun-22	<i>Medicago truncatula</i>	Medtr6g059680.1
MtKun-23	<i>Medicago truncatula</i>	Medtr6g078100.1
MtKun-24	<i>Medicago truncatula</i>	Medtr6g059410.1
MtKun-25	<i>Medicago truncatula</i>	Medtr6g059730.1
MtKun-26	<i>Medicago truncatula</i>	Medtr8g059790.1
MtKun-27	<i>Medicago truncatula</i>	AC235677_10.1
MtKun-28	<i>Medicago truncatula</i>	AC235677_27.1
AtKun-1	<i>Arabidopsis thaliana</i>	AT1G73330.1
AtKun-2	<i>Arabidopsis thaliana</i>	AT1G72290.1
AtKun-3	<i>Arabidopsis thaliana</i>	AT1G73325.1
AtKun-4	<i>Arabidopsis thaliana</i>	AT1G73260.1
AtKun-5	<i>Arabidopsis thaliana</i>	AT1G17860.1
FvKun-1	<i>Fragaria vesca</i>	gene08979-v1.0
FvKun-2	<i>Fragaria vesca</i>	gene08978-v1.0
FvKun-3	<i>Fragaria vesca</i>	gene27334-v1.0
FvKun-4	<i>Fragaria vesca</i>	gene27360-v1.0
FvKun-5	<i>Fragaria vesca</i>	gene27359-v1.0
VvKun-1	<i>Vitis vinifera</i>	GSVIVT01012920001
VvKun-2	<i>Vitis vinifera</i>	GSVIVT01012922001

VvKun-3	<i>Vitis vinifera</i>	GSVIVT01012932001
VvKun-4	<i>Vitis vinifera</i>	GSVIVT01012936001
BdKun-1	<i>Brachypodium distachyon</i>	Bradi4g01470.1
BdKun-2	<i>Brachypodium distachyon</i>	Bradi5g16290.1
OsKun-1	<i>Oryza sativa</i>	LOC_Os04g44470.1
SbKun-1	<i>Sorghum bicolor</i>	Sb06g023160.1
ZmKun-1	<i>Zea mays</i>	GRMZM2G474575_T01

C. I4 Serpin sequences.

Protein	Organism	Gene model
MtSRP-1	<i>Medicago truncatula</i>	Medtr3g100520.1
MtSRP-2	<i>Medicago truncatula</i>	Medtr3g101030.1
MtSRP-3	<i>Medicago truncatula</i>	Medtr3g101150.1
MtSRP-4	<i>Medicago truncatula</i>	Medtr3g101180.1
MtSRP-5	<i>Medicago truncatula</i>	Medtr3g101050.1
MtSRP-6	<i>Medicago truncatula</i>	Medtr7g050750.1
MtSRP-7	<i>Medicago truncatula</i>	Medtr3g101010.1
MtSRP-8	<i>Medicago truncatula</i>	Medtr3g114310.1
MtSRP-9	<i>Medicago truncatula</i>	Medtr3g101130.1
MtSRP-10	<i>Medicago truncatula</i>	Medtr3g015760.1
MtSRP-11	<i>Medicago truncatula</i>	Medtr3g101200.1
MtSRP-12	<i>Medicago truncatula</i>	Medtr3g015620.1
MtSRP-13	<i>Medicago truncatula</i>	Medtr3g111160.1
MtSRP-14	<i>Medicago truncatula</i>	Medtr3g018740.1
MtSRP-15	<i>Medicago truncatula</i>	Medtr3g100990.1
MtSRP-16	<i>Medicago truncatula</i>	Medtr7g050810.1
FvSRP-1	<i>Fragaria vesca</i>	mrna16217.1-v1.0-hybrid
FvSRP-2	<i>Fragaria vesca</i>	mrna31740.1-v1.0-hybrid
FvSRP-3	<i>Fragaria vesca</i>	mrna15046.1-v1.0-hybrid
FvSRP-4	<i>Fragaria vesca</i>	mrna01845.1-v1.0-hybrid
FvSRP-5	<i>Fragaria vesca</i>	mrna32429.1-v1.0-hybrid
FvSRP-6	<i>Fragaria vesca</i>	mrna10757.1-v1.0-hybrid
FvSRP-7	<i>Fragaria vesca</i>	mrna03508.1-v1.0-hybrid
FvSRP-8	<i>Fragaria vesca</i>	mrna30734.1-v1.0-hybrid
FvSRP-9	<i>Fragaria vesca</i>	mrna28549.1-v1.0-hybrid
FvSRP-10	<i>Fragaria vesca</i>	mrna29691.1-v1.0-hybrid
FvSRP-11	<i>Fragaria vesca</i>	mrna07851.1-v1.0-hybrid
FvSRP-12	<i>Fragaria vesca</i>	mrna07850.1-v1.0-hybrid
FvSRP-13	<i>Fragaria vesca</i>	mrna30732.1-v1.0-hybrid
FvSRP-14	<i>Fragaria vesca</i>	mrna28546.1-v1.0-hybrid
AtSRP-1	<i>Arabidopsis thaliana</i>	AT2G14540.1
AtSRP-2	<i>Arabidopsis thaliana</i>	AT2G26390.1
AtSRP-3	<i>Arabidopsis thaliana</i>	AT2G25240.1
AtSRP-4	<i>Arabidopsis thaliana</i>	AT2G35580.1
AtSRP-5	<i>Arabidopsis thaliana</i>	AT1G47710.1
AtSRP-6	<i>Arabidopsis thaliana</i>	AT1G62170.2
AtSRP-7	<i>Arabidopsis thaliana</i>	AT1G64030.1

AtSRP-8	<i>Arabidopsis thaliana</i>	AT3G45220.1
SbSRP-1	<i>Sorghum bicolor</i>	Sb01g006070.1
SbSRP-2	<i>Sorghum bicolor</i>	Sb01g014730.1
SbSRP-3	<i>Sorghum bicolor</i>	Sb01g014740.1
SbSRP-4	<i>Sorghum bicolor</i>	Sb02g004040.1
SbSRP-5	<i>Sorghum bicolor</i>	Sb03g010560.1
SbSRP-6	<i>Sorghum bicolor</i>	Sb03g010570.1
SbSRP-7	<i>Sorghum bicolor</i>	Sb03g035570.1
SbSRP-8	<i>Sorghum bicolor</i>	Sb04g001380.1
SbSRP-9	<i>Sorghum bicolor</i>	Sb05g007550.1
SbSRP-10	<i>Sorghum bicolor</i>	Sb05g008400.1
SbSRP-11	<i>Sorghum bicolor</i>	Sb05g008490.1
SbSRP-12	<i>Sorghum bicolor</i>	Sb05g022570.1
SbSRP-13	<i>Sorghum bicolor</i>	Sb06g023640.1
SbSRP-14	<i>Sorghum bicolor</i>	Sb06g023660.1
SbSRP-15	<i>Sorghum bicolor</i>	Sb07g025180.1
SbSRP-16	<i>Sorghum bicolor</i>	Sb09g000460.1
OsSRP-1	<i>Oryza sativa</i>	Os04g45120.1
OsSRP-2	<i>Oryza sativa</i>	Os04g45110.1
OsSRP-3	<i>Oryza sativa</i>	Os01g56010.1
OsSRP-4	<i>Oryza sativa</i>	Os01g16200.1
OsSRP-5	<i>Oryza sativa</i>	Os03g41438.1
OsSRP-6a	<i>Oryza sativa</i>	Os03g41419.1 a
OsSRP-6b	<i>Oryza sativa</i>	Os03g41419.1 b
OsSRP-7	<i>Oryza sativa</i>	Os05g43590.1
OsSRP-8	<i>Oryza sativa</i>	Os11g12410.1
OsSRP-9	<i>Oryza sativa</i>	Os11g13530.1
OsSRP-10	<i>Oryza sativa</i>	Os11g12460.1
OsSRP-11	<i>Oryza sativa</i>	Os11g13540.1
OsSRP-12	<i>Oryza sativa</i>	Os11g12420.1
OsSRP-13	<i>Oryza sativa</i>	Os11g11720.1
OsSRP-14	<i>Oryza sativa</i>	Os11g11500.1
OsSRP-15	<i>Oryza sativa</i>	Os11g11760.1
SmSRP-1	<i>Selaginella moellendorffii</i>	173749
PpSRP-1	<i>Physcomitrella patens</i>	Pp019G069200.1
PpSRP-2	<i>Physcomitrella patens</i>	Pp011G040300.1
PpSRP-3	<i>Physcomitrella patens</i>	Pp001G054300.1
PpSRP-4	<i>Physcomitrella patens</i>	Pp002G113700.1
CrSRP-1	<i>Chlamydomonas reinhardtii</i>	Cre16.g679550.t1.1
VcSRP-1	<i>Volvox carteri</i>	Vocar20000111m

D. I6 Cereal sequences.

Protein	Organism	Gene model
MgATI-1	<i>Mimulus guttatus</i>	gmgv1a015473m
RcATI-1a	<i>Ricinus communis</i>	t00004428166.m001081a
RcATI-1b	<i>Ricinus communis</i>	t00004428166.m001081b
RcATI-2a	<i>Ricinus communis</i>	t00004528166.m001082a

RcATI-2b	<i>Ricinus communis</i>	t00004528166.m001082b
RcATI-3	<i>Ricinus communis</i>	t00004628166.m001083
RcATI-4	<i>Ricinus communis</i>	t00002230156.m001719
RcATI-5	<i>Ricinus communis</i>	t00003628166.m001073
RcATI-6a	<i>Ricinus communis</i>	t00004228166.m001079a
RcATI-6b	<i>Ricinus communis</i>	t00004228166.m001079b
VvATI-1	<i>Vitis vinifera</i>	GSVIVT01001973001
BdATI-1	<i>Brachypodium distachyon</i>	Bradi1g53970.1
BdATI-2	<i>Brachypodium distachyon</i>	Bradi1g54000.1
BdATI-3	<i>Brachypodium distachyon</i>	Bradi1g53990.1
OsATI-1	<i>Oryza sativa</i>	LOC_Os07g11380.1
OsATI-2	<i>Oryza sativa</i>	LOC_Os07g12080.1
OsATI-3	<i>Oryza sativa</i>	LOC_Os07g11650.1
OsATI-4	<i>Oryza sativa</i>	LOC_Os07g11630.1
OsATI-5	<i>Oryza sativa</i>	LOC_Os07g11310.1
OsATI-6	<i>Oryza sativa</i>	LOC_Os07g11330.1
OsATI-7	<i>Oryza sativa</i>	LOC_Os07g11510.1
OsATI-8	<i>Oryza sativa</i>	LOC_Os07g11410.1
OsATI-9	<i>Oryza sativa</i>	LOC_Os05g41970.1
OsATI-10	<i>Oryza sativa</i>	Os07g11320.1_ORYSA
OsATI-11	<i>Oryza sativa</i>	Os07g11360.1_ORYSA
SbATI-1	<i>Sorghum bicolor</i>	Sb02g002495.1
SbATI-2	<i>Sorghum bicolor</i>	Sb02g002500.1
SbATI-3	<i>Sorghum bicolor</i>	Sb02g006470.1
SbATI-4	<i>Sorghum bicolor</i>	Sb02g006480.1
SbATI-5	<i>Sorghum bicolor</i>	Sb02g006550.1
SbATI-6	<i>Sorghum bicolor</i>	Sb02g006560.1
SbATI-7	<i>Sorghum bicolor</i>	Sb02g006570.1
SbATI-8	<i>Sorghum bicolor</i>	Sb09g024570.1
ZmATI-1	<i>Zea mays</i>	GRMZM2G404688_T01
ZmATI-2	<i>Zea mays</i>	GRMZM2G304548_T01

E. I12 Bowman-Birk sequences.

Protein	Organism	Gene model
GmBBI-1	<i>Glycine max</i>	Glyma14g26400.1
GmBBI-2	<i>Glycine max</i>	Glyma14g26410.1
GmBBI-3	<i>Glycine max</i>	Glyma09g28720.1
GmBBI-4	<i>Glycine max</i>	Glyma09g28730.1
GmBBI-5	<i>Glycine max</i>	Glyma09g28713.1
GmBBI-6	<i>Glycine max</i>	Glyma09g39640.1
GmBBI-7	<i>Glycine max</i>	Glyma09g39630.1
GmBBI-8	<i>Glycine max</i>	Glyma09g39621.1
GmBBI-9	<i>Glycine max</i>	Glyma16g33400.1
GmBBI-10	<i>Glycine max</i>	Glyma18g46550.1
GmBBI-11	<i>Glycine max</i>	Glyma18g46560.1
GmBBI-12	<i>Glycine max</i>	Glyma18g46580.1
MtBBI-1	<i>Medicago truncatula</i>	Medtr7g077320.1

MtBBI-2	<i>Medicago truncatula</i>	Medtr7g077300.1
MtBBI-3	<i>Medicago truncatula</i>	Medtr7g077340.1
MtBBI-4	<i>Medicago truncatula</i>	Medtr7g077260.1
MtBBI-5	<i>Medicago truncatula</i>	Medtr7g077190.1
MtBBI-6	<i>Medicago truncatula</i>	Medtr7g077310.1
MtBBI-7	<i>Medicago truncatula</i>	Medtr7g077160.1
MtBBI-8	<i>Medicago truncatula</i>	Medtr7g077220.1
MtBBI-9	<i>Medicago truncatula</i>	Medtr7g077230.1
MtBBI-10	<i>Medicago truncatula</i>	Medtr7g077180.1
MtBBI-11a	<i>Medicago truncatula</i>	Medtr7g077210.1
MtBBI-11b	<i>Medicago truncatula</i>	Medtr7g077210.1
MtBBI-12	<i>Medicago truncatula</i>	Medtr7g077350.1
BdBBI-1	<i>Brachypodium distachyon</i>	Bradi3g22860.1
BdBBI-2a	<i>Brachypodium distachyon</i>	Bradi2g01920.1
BdBBI-2b	<i>Brachypodium distachyon</i>	Bradi2g01920.1
BdBBI-3	<i>Brachypodium distachyon</i>	Bradi1g50670.2
BdBBI-4a	<i>Brachypodium distachyon</i>	Bradi2g01930.1
BdBBI-4b	<i>Brachypodium distachyon</i>	Bradi2g01930.1
BdBBI-5	<i>Brachypodium distachyon</i>	Bradi1g50670.1
BdBBI-6a	<i>Brachypodium distachyon</i>	Bradi2g01910.1
BdBBI-6b	<i>Brachypodium distachyon</i>	Bradi2g01910.1
OsBBI-1a	<i>Oryza sativa</i>	LOC_Os01g03380.1
OsBBI-1b	<i>Oryza sativa</i>	LOC_Os01g03380.1
OsBBI-2a	<i>Oryza sativa</i>	LOC_Os01g03310.1
OsBBI-2b	<i>Oryza sativa</i>	LOC_Os01g03310.1
OsBBI-3a	<i>Oryza sativa</i>	LOC_Os01g03390.1
OsBBI-3b	<i>Oryza sativa</i>	LOC_Os01g03390.1
OsBBI-4a	<i>Oryza sativa</i>	LOC_Os01g03680.1
OsBBI-4b	<i>Oryza sativa</i>	LOC_Os01g03680.1
OsBBI-5a	<i>Oryza sativa</i>	LOC_Os01g03320.1
OsBBI-5b	<i>Oryza sativa</i>	LOC_Os01g03320.1
OsBBI-6a	<i>Oryza sativa</i>	LOC_Os01g03360.1
OsBBI-6b	<i>Oryza sativa</i>	LOC_Os01g03360.1
OsBBI-6c	<i>Oryza sativa</i>	LOC_Os01g03360.1
OsBBI-7a	<i>Oryza sativa</i>	LOC_Os01g03340.1
OsBBI-7b	<i>Oryza sativa</i>	LOC_Os01g03340.1
OsBBI-7c	<i>Oryza sativa</i>	LOC_Os01g03340.1
OsBBI-8a	<i>Oryza sativa</i>	LOC_Os01g03330.1
OsBBI-8b	<i>Oryza sativa</i>	LOC_Os01g03330.1
OsBBI-8c	<i>Oryza sativa</i>	LOC_Os01g03330.1
OsBBI-9	<i>Oryza sativa</i>	LOC_Os03g60840.1
SbBBI-1	<i>Sorghum bicolor</i>	Sb01g003000.1
SbBBI-2	<i>Sorghum bicolor</i>	Sb03g039790.1
SbBBI-3	<i>Sorghum bicolor</i>	Sb03g039800.1
SbBBI-4	<i>Sorghum bicolor</i>	Sb05g026650.1
SbBBI-5	<i>Sorghum bicolor</i>	Sb05g026670.1
SbBBI-6	<i>Sorghum bicolor</i>	Sb05g026680.1
SbBBI-7	<i>Sorghum bicolor</i>	Sb05g026700.1

ZmBBI-1a	<i>Zea mays</i>	GRMZM2G114552_T01
ZmBBI-1b	<i>Zea mays</i>	GRMZM2G114552_T01
ZmBBI-2a	<i>Zea mays</i>	AC208221.3_FGT002
ZmBBI-2b	<i>Zea mays</i>	AC208221.3_FGT002
ZmBBI-3a	<i>Zea mays</i>	GRMZM2G447785_T02
ZmBBI-3b	<i>Zea mays</i>	GRMZM2G447785_T02
ZmBBI-4	<i>Zea mays</i>	AC212728.3_FGT001

F. I13 Pin-I sequences.

Protein	Organism	Gene model
MtPINI-1	<i>Medicago truncatula</i>	Medtr3g020800.1
MtPINI-2	<i>Medicago truncatula</i>	Medtr3g020930.1
MtPINI-3	<i>Medicago truncatula</i>	Medtr3g020970.1
MtPINI-4	<i>Medicago truncatula</i>	Medtr3g020880.1
MtPINI-5	<i>Medicago truncatula</i>	Medtr5g090250.1
MtPINI-6	<i>Medicago truncatula</i>	Medtr5g045470.1
MtPINI-7	<i>Medicago truncatula</i>	Medtr1g075340.1
MtPINI-8	<i>Medicago truncatula</i>	Medtr1g075380.1
MtPINI-9	<i>Medicago truncatula</i>	Medtr1g075410.1
FvPINI-1	<i>Fragaria vesca</i>	mrna32568.1-v1.0-hybrid
FvPINI-2	<i>Fragaria vesca</i>	mrna32558.1-v1.0-hybrid
FvPINI-3	<i>Fragaria vesca</i>	mrna32561.1-v1.0-hybrid
FvPINI-4	<i>Fragaria vesca</i>	mrna32563.1-v1.0-hybrid
FvPINI-5	<i>Fragaria vesca</i>	mrna32562.1-v1.0-hybrid
AtPINI-1	<i>Arabidopsis thaliana</i>	AT3G46860.1
AtPINI-2	<i>Arabidopsis thaliana</i>	AT3G50020.1
AtPINI-3	<i>Arabidopsis thaliana</i>	AT5G43580.1
AtPINI-4	<i>Arabidopsis thaliana</i>	AT5G43570.1
AtPINI-5	<i>Arabidopsis thaliana</i>	AT2G38870.1
AtPINI-6	<i>Arabidopsis thaliana</i>	AT2G38900.2
VvPINI-1	<i>Vitis vinifera</i>	GSVIVT01018137001
VvPINI-2	<i>Vitis vinifera</i>	GSVIVT01018139001
VvPINI-3	<i>Vitis vinifera</i>	GSVIVT01018141001
VvPINI-4	<i>Vitis vinifera</i>	GSVIVT01018142001
VvPINI-5	<i>Vitis vinifera</i>	GSVIVT01032743001
VvPINI-6	<i>Vitis vinifera</i>	GSVIVT01034125001
SbPINI-1	<i>Sorghum bicolor</i>	Sb04g001965.1
SbPINI-2	<i>Sorghum bicolor</i>	Sb04g001970.1
SbPINI-3	<i>Sorghum bicolor</i>	Sb04g002002.1
SbPINI-4	<i>Sorghum bicolor</i>	Sb04g002030.1
SbPINI-5	<i>Sorghum bicolor</i>	Sb04g002045.1
SbPINI-6	<i>Sorghum bicolor</i>	Sb08g005570.1
SbPINI-7	<i>Sorghum bicolor</i>	Sb09g001010.1
SbPINI-8	<i>Sorghum bicolor</i>	Sb09g001020.1

SbPINI-9	<i>Sorghum bicolor</i>	Sb09g001030.1
SbPINI-10	<i>Sorghum bicolor</i>	Sb09g001040.1
SbPINI-11	<i>Sorghum bicolor</i>	Sb09g001050.1
SbPINI-12	<i>Sorghum bicolor</i>	Sb09g001060.1
SbPINI-13	<i>Sorghum bicolor</i>	Sb09g001070.1
SbPINI-14	<i>Sorghum bicolor</i>	Sb09g001080.1
SbPINI-15	<i>Sorghum bicolor</i>	Sb09g001083.1
SbPINI-16	<i>Sorghum bicolor</i>	Sb09g001086.1
SbPINI-17	<i>Sorghum bicolor</i>	Sb09g017500.1
SbPINI-18	<i>Sorghum bicolor</i>	Sb04g001980.1
SbPINI-19	<i>Sorghum bicolor</i>	Sb04g001990.1
SbPINI-20	<i>Sorghum bicolor</i>	Sb1445s002010.1
SbPINI-21	<i>Sorghum bicolor</i>	Sb04g002020.1
SbPINI-22	<i>Sorghum bicolor</i>	Sb04g002040.1
SbPINI-23	<i>Sorghum bicolor</i>	Sb04g002050.1
OsPINI-1	<i>Oryza sativa</i>	Os02g03170.1
OsPINI-2	<i>Oryza sativa</i>	Os06g21540.1
OsPINI-3	<i>Oryza sativa</i>	Os08g34258.1
OsPINI-4	<i>Oryza sativa</i>	Os08g34249.1
OsPINI-5	<i>Oryza sativa</i>	Os01g42860.1
OsPINI-6	<i>Oryza sativa</i>	Os02g03140.1
OsPINI-7	<i>Oryza sativa</i>	Os02g03190.1
OsPINI-8	<i>Oryza sativa</i>	Os02g03150.1
OsPINI-9	<i>Oryza sativa</i>	Os12g36210.1
OsPINI-10	<i>Oryza sativa</i>	Os12g25090.2
OsPINI-11	<i>Oryza sativa</i>	Os12g36240.1
OsPINI-12	<i>Oryza sativa</i>	Os05g01920.1
OsPINI-13	<i>Oryza sativa</i>	Os11g17790.1
OsPINI-14	<i>Oryza sativa</i>	Os02g03180.1
OsPINI-15	<i>Oryza sativa</i>	Os12g36220.1
SmPINI-1	<i>Selaginella moellendorffii</i>	84301
PpPINI-1	<i>Physcomitrella patens</i>	Pp017G009600.1
PpPINI-2	<i>Physcomitrella patens</i>	Pp023G080500.1
CsuPINI-1	<i>Coccomyxa subellipsoidea</i>	60469

G. I20 Pin-II sequences.

Protein	Organism	Gene model
RcPinII-1	<i>Ricinus communis</i>	30074.m001422
PtPinII-1	<i>Populus trichocarpa</i>	Potri.019G080600.1
PpPinII-1	<i>Prunus persica</i>	ppa017948m
PpPinII-2	<i>Prunus persica</i>	ppb022308m
FvPinII-1	<i>Fragaria vesca</i>	mrna25667.1-v1.0-hybrid
AtPinII-1	<i>Arabidopsis thaliana</i>	AT1G72060.1

VvPinII-1	<i>Vitis vinifera</i>	GSVIVT01023245001
MgPinII-1	<i>Mimulus guttatus</i>	mgv1a025135m
SbPinII-1	<i>Sorghum bicolor</i>	Sb01g008960.1
SbPinII-2	<i>Sorghum bicolor</i>	Sb03g009370.1
ZmPinII-1	<i>Zea mays</i>	GRMZM2G108847_T01
OsPinII-1	<i>Oryza sativa</i>	Os03g52390.1
BdPinII-1	<i>Brachypodium distachyon</i>	Bradi2g08720.1_BRADI
SmPinII-4a	<i>Selaginella moellendorffii</i>	444521
SmPinII-4b	<i>Selaginella moellendorffii</i>	444521
SmPinII-1a	<i>Selaginella moellendorffii</i>	438273
SmPinII-1b	<i>Selaginella moellendorffii</i>	438273
SmPinII-2a	<i>Selaginella moellendorffii</i>	438274
SmPinII-2b	<i>Selaginella moellendorffii</i>	438274
SmPinII-3a	<i>Selaginella moellendorffii</i>	438284
SmPinII-3b	<i>Selaginella moellendorffii</i>	438284

H. I25 Cystatin sequences.

Protein	Organism	Gene model
AtCPI-2	<i>Arabidopsis thaliana</i>	AT2G31980.1
AtCPI-3	<i>Arabidopsis thaliana</i>	AT2G40880.1
AtCPI-4	<i>Arabidopsis thaliana</i>	AT4G16500.1
AtCPI-6	<i>Arabidopsis thaliana</i>	AT3G12490.2
AtCPI-5	<i>Arabidopsis thaliana</i>	AT5G47550.1
AtCPI-1	<i>Arabidopsis thaliana</i>	AT5G12140.1
AtCPI-7	<i>Arabidopsis thaliana</i>	AT5G05110.1
CrCPI-1	<i>Chlamydomonas reinhardtii</i>	Cre04.g225650.t1.2
VcCPI-1	<i>Volvox carteri</i>	Vocar20011820m
FvCPI-1	<i>Fragaria vesca</i>	mrna21484.1-v1.0-hybrid
FvCPI-2	<i>Fragaria vesca</i>	mrna21476.1-v1.0-hybrid
FvCPI-3	<i>Fragaria vesca</i>	mrna06633.1-v1.0-hybrid
FvCPI-4	<i>Fragaria vesca</i>	mrna25711.1-v1.0-hybrid
FvCPI-5	<i>Fragaria vesca</i>	mrna34164.1-v1.0-hybrid
FvCPI-6	<i>Fragaria vesca</i>	mrna19785.1-v1.0-hybrid
FvCPI-7	<i>Fragaria vesca</i>	mrna13968.1-v1.0-hybrid
FvCPI-8	<i>Fragaria vesca</i>	mrna29824.1-v1.0-hybrid
FvCPI-9	<i>Fragaria vesca</i>	mrna16463.1-v1.0-hybrid
FvCPI-10	<i>Fragaria vesca</i>	mrna25708.1-v1.0-hybrid
FvCPI-11	<i>Fragaria vesca</i>	mrna20093.1-v1.0-hybrid
FvCPI-12	<i>Fragaria vesca</i>	mrna29817.1-v1.0-hybrid
OsCPI-10	<i>Oryza sativa</i>	Os04g28250.1
OsCPI-1	<i>Oryza sativa</i>	Os01g58890.1
OsCPI-12	<i>Oryza sativa</i>	Os01g16430.1
OsCPI-5	<i>Oryza sativa</i>	Os01g68670.1

OsCPI-4	<i>Oryza sativa</i>	Os01g68660.1
OsCPI-6	<i>Oryza sativa</i>	Os03g11180.1
OsCPI-7	<i>Oryza sativa</i>	Os03g11170.1
OsCPI-9	<i>Oryza sativa</i>	Os03g11160.1
OsCPI-13	<i>Oryza sativa</i>	Os03g07620.1
OsCPI-8	<i>Oryza sativa</i>	Os03g31510.1
OsCPI-11	<i>Oryza sativa</i>	Os09g08100.1
OsCPI-2	<i>Oryza sativa</i>	Os05g41460.1
OsCPI-14	<i>Oryza sativa</i>	Os03g07610.1
OsCPI-15	<i>Oryza sativa</i>	Os03g07660.1
OsCPI-16	<i>Oryza sativa</i>	Os03g07650.1
OsCPI-17	<i>Oryza sativa</i>	Os03g07700.1
OsCPI-18	<i>Oryza sativa</i>	Os02g17770.1
OsCPI-3	<i>Oryza sativa</i>	Os05g33880.2
PpCPI-1	<i>Physcomitrella patens</i>	Pp1s66_209V6.2
PpCPI-2	<i>Physcomitrella patens</i>	Pp1s212_8V6.1
PpCPI-4	<i>Physcomitrella patens</i>	Pp1s238_59V6.1
PpCPI-3	<i>Physcomitrella patens</i>	Pp1s238_60V6.1
PpCPI-5	<i>Physcomitrella patens</i>	Pp1s142_12V6.1
SbCPI-1	<i>Sorghum bicolor</i>	Sb01g031440.1
SbCPI-2	<i>Sorghum bicolor</i>	Sb01g031450.1
SbCPI-3	<i>Sorghum bicolor</i>	Sb01g031460.1
SbCPI-4	<i>Sorghum bicolor</i>	Sb01g031470.1
SbCPI-5	<i>Sorghum bicolor</i>	Sb01g043320.1
SbCPI-6	<i>Sorghum bicolor</i>	Sb01g045590.1
SbCPI-7	<i>Sorghum bicolor</i>	Sb01g045610.1
SbCPI-8	<i>Sorghum bicolor</i>	Sb01g045630.1
SbCPI-9	<i>Sorghum bicolor</i>	Sb03g010730.1
SbCPI-10	<i>Sorghum bicolor</i>	Sb03g037370.1
SbCPI-11	<i>Sorghum bicolor</i>	Sb03g043680.1
SbCPI-12	<i>Sorghum bicolor</i>	Sb04g026140.1
SbCPI-13	<i>Sorghum bicolor</i>	Sb09g020170.1
SbCPI-14	<i>Sorghum bicolor</i>	Sb09g024230.1
SbCPI-15	<i>Sorghum bicolor</i>	Sb09g024240.1
SbCPI-16	<i>Sorghum bicolor</i>	Sb1560s002010.1
SbCPI-17	<i>Sorghum bicolor</i>	Sb01g023010.1
SbCPI-18	<i>Sorghum bicolor</i>	Sb01g045600.1
SbCPI-19	<i>Sorghum bicolor</i>	Sb01g015950.1
SbCPI-20	<i>Sorghum bicolor</i>	Sb09g024410.1
MtCPI-1	<i>Medicago truncatula</i>	Medtr3g043750.1
MtCPI-2	<i>Medicago truncatula</i>	Medtr3g084780.1
MtCPI-3	<i>Medicago truncatula</i>	Medtr2g076740.1
MtCPI-4	<i>Medicago truncatula</i>	Medtr2g028060.1
MtCPI-5	<i>Medicago truncatula</i>	Medtr2g103740.1
MtCPI-6	<i>Medicago truncatula</i>	Medtr2g076800.1

MtCPI-7	<i>Medicago truncatula</i>	Medtr2g028100.1
MtCPI-8	<i>Medicago truncatula</i>	Medtr2g028520.1
MtCPI-9	<i>Medicago truncatula</i>	Medtr2g026040.1
MtCPI-10	<i>Medicago truncatula</i>	Medtr2g028080.1
MtCPI-11	<i>Medicago truncatula</i>	Medtr6g078440.1
MtCPI-12	<i>Medicago truncatula</i>	Medtr5g091360.1
MtCPI-13	<i>Medicago truncatula</i>	Medtr5g088770.1
MtCPI-14	<i>Medicago truncatula</i>	Medtr5g098560.1
MtCPI-15	<i>Medicago truncatula</i>	Medtr5g091260.1
MtCPI-16	<i>Medicago truncatula</i>	Medtr5g098550.1
MtCPI-17	<i>Medicago truncatula</i>	Medtr5g091280.1
MtCPI-18	<i>Medicago truncatula</i>	Medtr5g091520.1
MtCPI-19	<i>Medicago truncatula</i>	Medtr8g041410.1
MtCPI-20	<i>Medicago truncatula</i>	Medtr8g079410.1
MtCPI-21	<i>Medicago truncatula</i>	Medtr4g095630.1
MtCPI-22	<i>Medicago truncatula</i>	Medtr4g133540.1
SmCPI-1	<i>Selaginella moellendorffii</i>	19455
SmCPI-2	<i>Selaginella moellendorffii</i>	418098
SmCPI-3	<i>Selaginella moellendorffii</i>	85303
VvCPI-1	<i>Vitis vinifera</i>	GSVIVT01003320001
VvCPI-2	<i>Vitis vinifera</i>	GSVIVT01025801001
VvCPI-3	<i>Vitis vinifera</i>	GSVIVT01026080001
VvCPI-4	<i>Vitis vinifera</i>	GSVIVT01036582001
VvCPI-5	<i>Vitis vinifera</i>	GSVIVT01037389001

I. I51 Serine Carboxypeptidase Y inhibitor sequences.

Protein	Organism	Gene model
AtSCPYP1-1	<i>Arabidopsis thaliana</i>	AT2G27550.1
AtSCPYP1-2	<i>Arabidopsis thaliana</i>	AT4G20370.1
AtSCPYP1-3	<i>Arabidopsis thaliana</i>	AT1G18100.1
AtSCPYP1-4	<i>Arabidopsis thaliana</i>	AT1G65480.1
AtSCPYP1-5	<i>Arabidopsis thaliana</i>	AT5G62040.1
AtSCPYP1-6	<i>Arabidopsis thaliana</i>	AT5G03840.1
FvSCPYP1-1	<i>Fragaria vesca</i>	mrna13304.1-v1.0-hybrid
FvSCPYP1-2	<i>Fragaria vesca</i>	mrna21535.1-v1.0-hybrid
FvSCPYP1-3	<i>Fragaria vesca</i>	mrna21992.1-v1.0-hybrid
FvSCPYP1-4	<i>Fragaria vesca</i>	mrna09405.1-v1.0-hybrid
FvSCPYP1-5	<i>Fragaria vesca</i>	mrna28959.1-v1.0-hybrid
MtSCPYP1-1	<i>Medicago truncatula</i>	Medtr2g086270.1
MtSCPYP1-2	<i>Medicago truncatula</i>	Medtr7g085040.1
MtSCPYP1-3	<i>Medicago truncatula</i>	Medtr7g006690.1
MtSCPYP1-4	<i>Medicago truncatula</i>	Medtr7g084970.1
MtSCPYP1-5	<i>Medicago truncatula</i>	Medtr7g104460.1

MtSCPYI-6	<i>Medicago truncatula</i>	Medtr7g006630.1
MtSCPYI-7	<i>Medicago truncatula</i>	Medtr8g106840.1
MtSCPYI-8	<i>Medicago truncatula</i>	AC146807_25.1
VvSCPYI-1	<i>Vitis vinifera</i>	GSVIVP00007370001
VvSCPYI-2	<i>Vitis vinifera</i>	GSVIVP00012870001
VvSCPYI-3	<i>Vitis vinifera</i>	GSVIVP00013086001
VvSCPYI-4	<i>Vitis vinifera</i>	GSVIVP00017800001
VvSCPYI-5	<i>Vitis vinifera</i>	GSVIVP00021628001
VvSCPYI-6	<i>Vitis vinifera</i>	GSVIVP00037374001
OsSCPYI-1	<i>Oryza sativa</i>	Os01g02120.1
OsSCPYI-2	<i>Oryza sativa</i>	Os01g11940.1
OsSCPYI-3	<i>Oryza sativa</i>	Os02g13830.1
OsSCPYI-4	<i>Oryza sativa</i>	Os02g32950.1
OsSCPYI-5	<i>Oryza sativa</i>	Os04g33570.1
OsSCPYI-6	<i>Oryza sativa</i>	Os04g41130.1
OsSCPYI-7	<i>Oryza sativa</i>	Os06g06300.1
OsSCPYI-8	<i>Oryza sativa</i>	Os06g06320.1
OsSCPYI-9	<i>Oryza sativa</i>	Os06g30370.1
OsSCPYI-10	<i>Oryza sativa</i>	Os06g35940.1
OsSCPYI-11	<i>Oryza sativa</i>	Os09g33850.1
OsSCPYI-12	<i>Oryza sativa</i>	Os05g44180.1
OsSCPYI-13	<i>Oryza sativa</i>	Os12g05590.1
OsSCPYI-14	<i>Oryza sativa</i>	Os12g13030.1
OsSCPYI-15	<i>Oryza sativa</i>	Os11g05470.1
OsSCPYI-16	<i>Oryza sativa</i>	Os11g18870.1
OsSCPYI-17	<i>Oryza sativa</i>	Os02g39064.1
SbSCPYI-1	<i>Sorghum bicolor</i>	Sb0010s003120.1
SbSCPYI-2	<i>Sorghum bicolor</i>	Sb02g029725.1
SbSCPYI-3	<i>Sorghum bicolor</i>	Sb03g001700.1
SbSCPYI-4	<i>Sorghum bicolor</i>	Sb03g008270.1
SbSCPYI-5	<i>Sorghum bicolor</i>	Sb03g034580.1
SbSCPYI-6	<i>Sorghum bicolor</i>	Sb04g008320.1
SbSCPYI-7	<i>Sorghum bicolor</i>	Sb04g021650.1
SbSCPYI-8	<i>Sorghum bicolor</i>	Sb04g025210.1
SbSCPYI-9	<i>Sorghum bicolor</i>	Sb05g003200.1
SbSCPYI-10	<i>Sorghum bicolor</i>	Sb06g012260.1
SbSCPYI-11	<i>Sorghum bicolor</i>	Sb06g015490.1
SbSCPYI-12	<i>Sorghum bicolor</i>	Sb06g020850.1
SbSCPYI-13	<i>Sorghum bicolor</i>	Sb08g003210.1
SbSCPYI-14	<i>Sorghum bicolor</i>	Sb08g008180.1
SbSCPYI-15	<i>Sorghum bicolor</i>	Sb10g003940.1
SbSCPYI-16	<i>Sorghum bicolor</i>	Sb10g013070.1
SbSCPYI-17	<i>Sorghum bicolor</i>	Sb10g021790.1
SmSCPYI-1	<i>Selaginella moellendorffii</i>	416612
SmSCPYI-2	<i>Selaginella moellendorffii</i>	411506
SmSCPYI-3	<i>Selaginella moellendorffii</i>	235975
SmSCPYI-4	<i>Selaginella moellendorffii</i>	166207
SmSCPYI-5	<i>Selaginella moellendorffii</i>	413641

SmSCPYI-6	<i>Selaginella moellendorffii</i>	413642
SmSCPYI-7	<i>Selaginella moellendorffii</i>	413646
SmSCPYI-8	<i>Selaginella moellendorffii</i>	413647
SmSCPYI-9	<i>Selaginella moellendorffii</i>	413648
SmSCPYI-10	<i>Selaginella moellendorffii</i>	413667
SmSCPYI-11	<i>Selaginella moellendorffii</i>	143762
SmSCPYI-12	<i>Selaginella moellendorffii</i>	17528
SmSCPYI-13	<i>Selaginella moellendorffii</i>	416299
SmSCPYI-14	<i>Selaginella moellendorffii</i>	416302
SmSCPYI-15	<i>Selaginella moellendorffii</i>	416303
SmSCPYI-16	<i>Selaginella moellendorffii</i>	416312
SmSCPYI-17	<i>Selaginella moellendorffii</i>	416313
SmSCPYI-18	<i>Selaginella moellendorffii</i>	445941
PpSCPYI-1	<i>Physcomitrella patens</i>	Pp1s111_36V6.1
PpSCPYI-2	<i>Physcomitrella patens</i>	Pp1s441_20V6.1
PpSCPYI-3	<i>Physcomitrella patens</i>	Pp1s243_37V6.1
PpSCPYI-4	<i>Physcomitrella patens</i>	Pp1s34_16V6.1
PpSCPYI-5	<i>Physcomitrella patens</i>	Pp1s34_16V6.2
PpSCPYI-6	<i>Physcomitrella patens</i>	Pp1s68_5V6.1
CsSCPYI-1	<i>Coccomyxa subellipsoidea</i>	estExt_fgenesh1_pg.C_20153 46092
MpSCPYI-1	<i>Micromonas pusilla</i>	CCMP1545.EuGene.0000070162 59313
MpSCPYI-2	<i>Micromonas pusilla</i>	CCMP1545.EuGene.0000050752 58447