

Table S5. Maize genes from which *Helitrons* have captured fragments *

Accession	Gene Name	Protein Function	No. <i>Hels</i>	Carried by <i>Helitron</i>
NP_179816.1	AtRABH1d (Arabidopsis Rab GTPase homolog H1d); GTP binding [Arabidopsis thaliana].	similar to AtRABH1e (Arabidopsis Rab GTPase homolog H1e), GTP binding [Arabidopsis thaliana](TAIR:AT5G10260.1)	1	<i>Hel1_275a</i>
NP_173799.1	ATTPS9 (Arabidopsis thaliana trehalose-phosphatase/synthase 9)	gene="ATTPS9"	1	<i>Hel1_205a</i>
NP_194881.2	binding / catalytic/ coenzyme binding [Arabidopsis thaliana].	locus_tag="AT4G31530		<i>Hel1_309a</i>
NP_173499.1	calcium-binding EF hand family protein [Arabidopsis thaliana].	similar to calcium-binding EF hand family protein [Arabidopsis thaliana] (TAIR:AT1G21630.1)	1	<i>Hel1_219a</i>
NP_001106236.1	diacylglycerol kinase 2 [Zea mays].	gene="LOC100127508"	1	<i>Hel1_203a</i>
NP_001105049.1	D-type cyclin [Zea mays].	gene="cycD1"	1	<i>Hel1_205a</i>
NP_001077483.1	elongation factor 1-alpha / EF-1-alpha [Arabidopsis thaliana].	Identical to Elongation factor 1-alpha (A4) [Arabidopsis Thaliana] (GB:P13905)	1	<i>Hel1_288a(3'_1)</i>
ABF96171.1	expressed protein [Oryza sativa (japonica cultivar-group)].	region_name="DUF573" /note="Protein of unknown function, DUF573	1	<i>Hel1_259a</i>
ABA10486.1	faciata 1-like protein [Zea mays].	faciata 1-like protein	1	<i>Hel1_280a</i>
NP_001119099.1	gene_synonym="L23H3.10"; vacuolar ATP synthase, putative / V-ATPase, putative [Arabidopsis thaliana].	vacuolar ATP synthase, putative	1	<i>Hel1_300a</i>
NP_001119263.1	gene_synonym="MKD15.11; succinyl-CoA ligase (GDP-forming) alpha-chain, mitochondrial, putative / succinyl-CoA synthetase, alpha chain, putative / SCS-alpha, putative Arabidopsis].	Identical to Succinyl-CoA ligase [GDP-forming] subunit alpha-2, mitochondrial precursor [Arabidopsis Thaliana]	1	<i>Hel1_286a</i>
NP_001105245.1	gene="aoc1"; allene oxide cyclase1 [Zea mays].	allene oxide cyclase1	1	<i>Hel1_255a</i>
NP_001105500.1	gene="apx2; ascorbate peroxidase2 [Zea mays].	cytosolic ascorbate peroxidase	1	<i>Hel1_100d</i>

CAR70073.1	gene="AsnS2"; asparagine synthetase [Zea mays].	asparagine synthetase	1	<i>Hel1_233a(3'_2)</i>
NP_566305.1	gene="ATCHIP/CHIP"; ATCHIP/CHIP (CARBOXYL TERMINUS OF HSC70-INTERACTING PROTEIN); ubiquitin-protein ligase [Arabidopsis thaliana].	ubiquitin-protein ligase	1	<i>Hel1_232a</i>
YP_899414.1	gene="atpB"; ATP synthase CF1 beta subunit [Sorghum bicolor].	ATP synthase CF1 beta subunit	1	<i>Hel1_240a(3'_2)</i>
NP_001105906.1	gene="CCamK"; putative calcium/calmodulin dependent protein kinase [Zea mays].	putative calcium/calmodulin dependent protein kinase	1	<i>Hel1_271a</i>
NP_001105685.1	gene="ccp1; cysteine protease1 [Zea mays]	cysteine proteinase; pZSS5; PCO074362; thp*-D45402; thp*-X82185; PCO074362_ov; PCO074362(205); thiol protease X82185; thiol protease -D45402.	6	<i>Hel1_100a-e; Hel1_209a</i>
NP_001104954.1	gene="CesA-1"; cellulose synthase-1 [Zea mays].	cellulose synthase-1	26	<i>Hel1_106a-z</i>
NP_001104957.1	gene="cesa7"; cellulose synthase7 [Zea mays].	cellulose synthase7	1	<i>Hel1_210a</i>
NP_194159.1	gene="CPHSC70-1"; CPHSC70-1 (chloroplast heat shock protein 70-1); ATP binding / unfolded protein binding [Arabidopsis thaliana].	chloroplast heat shock protein 70-1	1	<i>Hel1_280a</i>
NP_001105387.1	gene="CYCZM2W"; type A-like cyclin [Zea mays].	type A-like cyclin	1	<i>Hel1_270a</i>
NP_192402.1	gene="DES-1-LIKE"; DES-1-LIKE (fatty acid desaturase 1-like); oxidoreductase [Arabidopsis thaliana].	DES-1-LIKE (fatty acid desaturase 1-like); oxidoreductase	1	<i>Hel1_300a</i>
NP_001105598.1	gene="gpm374"; golgi associated protein se-wap41 [Zea mays].	golgi associated protein se-wap41	3	<i>Hel1_116a,b,c</i>
NP_001105858.1	gene="HK1b1"; histidine kinase [Zea mays].	histidine kinase	1	<i>Hel1_229a</i>
NP_001105471.1	gene="hox3"; homeobox3 [Zea mays].	homeobox3	1	<i>Hel1_288a(3'_1)</i>
NP_001105549.1	gene="koln2b(hox)"; Hox2b protein [Zea mays].	Hox2b protein	3	<i>Hel1_114a,b,c</i>
NP_001105967.1	gene="LOC100037796"; putative protein kinase [Zea mays].	putative protein kinase	1	<i>Hel1_232a</i>
NP_001106238.1	gene="LOC100127510"; diacylglycerol kinase 3 [Zea mays].	diacylglycerol kinase 3	2	<i>Hel1_118a,b</i>

NP_001123593.1	gene="LOC100170239"; trehalose-6-phosphate synthase [Zea mays].	trehalose-6-phosphate synthase	1	<i>Hel1_283a</i>
NP_001123601.1	gene="LOC100170248"; hexose transporter [Zea mays].	hexose transporter	1	<i>Hel1_263a</i>
NP_001130200.1	gene="LOC100191294"; hypothetical protein LOC100191294 [Zea mays].	hypothetical protein LOC100191294	1	<i>Hel1_297a(5'_2)</i>
NP_001105202.1	gene="LOC542099"; cold acclimation protein COR413-PM1 [Zea mays].	cold acclimation protein COR413-PM1	1	<i>Hel1_283a</i>
NP_001105252.1	gene="LOC542160"; 26S proteasome regulatory complex ATPase RPT3 [Zea mays].	26S proteasome regulatory complex ATPase RPT3	1	<i>Hel1_223a</i>
NP_001105413.1	gene="LOC542367"; GADPH (AA 1-337) [Zea mays].	Glyceraldehyde-3-phosphate dehydrogenase, cytosolic 1"	1	<i>Hel1_218a</i>
NP_001105460.1	gene="LOC542424"; gamma-tubulin [Zea mays].	gamma-tubulin		<i>Hel1_309a</i>
NP_001105635.1	gene="LOC542641"; 40S ribosomal protein S24 [Zea mays].	40S ribosomal protein S24	1	<i>Hel1_244a(5'_1)</i>
NP_001105869.1	gene="LOC732779"; pentatricopeptide repeat protein [Zea mays].	pentatricopeptide repeat protein [Zea mays].	2	<i>Hel1_108a,b</i>
NP_001105908.1	gene="LOC732827"; putative wound responsive protein [Zea mays].	putative wound responsive protein [Zea mays].	1	<i>Hel1_114d</i>
CAD59590.1	gene="mdr3"; MDR-like ABC transporter [Oryza sativa (japonica cultivar-group)].	MDR-like ABC transporter	1	<i>Hel1_210a</i>
NP_001105313.1	gene="me3"; NADP malic enzyme3 [Zea mays].	NADP malic enzyme3	1	<i>Hel1_270a</i>
NP_001105470.1	gene="mha2"; plasma-membrane H+ATPase2 [Zea mays].	plasma-membrane H+ATPase2	1	<i>Hel1_298a</i>
BAD17149.1	gene="OJ1448_G06.23"; kinesin motor protein 1-like [Oryza sativa Japonica Group].	kinesin motor protein 1-like	1	<i>Hel1_301a</i>
AAK63878.1	gene="OSJNBa0030B02.16"; Putative salt-inducible protein [Oryza sativa].	Putative salt-inducible protein	1	<i>Hel1_284a</i>
AAO17020.1	gene="OSJNBa0090O10.10"; Hypothetical protein [Oryza sativa (japonica cultivar-group)].	Hypothetical protein	5	<i>Hel1_121a-e</i>
BAD35894.1	gene="P0664C05.15; putative homeobox [Oryza sativa Japonica Group]	putative homeobox [Oryza sativa Japonica Group]	1	<i>Hel1_100f</i>
CAA10889.1	gene="PARP"; poly(ADP-ribose) polymerase [Zea mays].	poly(ADP-ribose) polymerase	1	<i>Hel1_300a</i>

NP_001105763.1	gene="PDIL1-5"; protein disulfide isomerase [Zea mays].	gene="PDIL1-5"	1	<i>Hel1_301a</i>
NP_001105762.1	gene="PDIL5-4"; protein disulfide isomerase [Zea mays].	protein disulfide isomerase	1	<i>Hel1_259a</i>
NP_001105381.1	gene="pds1"; phytoene desaturase [Zea mays].	phytoene desaturase	1	<i>Hel1_242a</i>
AAP06789.1	gene="phyB2"; phytochrome B2 apoprotein; PhyB2 [Zea mays].	phytochrome B2 apoprotein	1	<i>Hel1_245a(3'_1)</i>
NP_001105570.1	gene="pOMT1"; plastidic 2-oxoglutarate/malate transporter [Zea mays].	plastidic 2-oxoglutarate/malate transporter	1	<i>Hel1_227a</i>
NP_001104932.1	gene="rpo2"; RNA polymerase2 [Zea mays].	T7-like RNA polymerase; Rpot; rpo71"	2	<i>Hel1_103a,b</i>
AAQ01754.1	gene="Smh1"; single myb histone 1 [Zea mays].	single myb histone	1	<i>Hel1_233a(3'_2)</i>
NP_001105694.1	gene="sps1"; sucrose phosphate synthase1 [Zea mays].	sucrose phosphate synthase1	1	<i>Hel1_126a</i>
NP_001104839.1	gene="sqs1"; squalene synthase1 [Zea mays].	squalene synthase1	1	<i>Hel1_237a(5'_1)</i>
AAU29331.1	gene="srp30"; ASF/SF2-like pre-mRNA splicing factor SRP30 [Zea mays].	ASF/SF2-like pre-mRNA splicing factor SRP30 [Zea mays].	2	<i>Hel1_118a,b</i>
ABQ23357.1	gene="sS1"; starch synthase I [Zea mays].	starch synthase I	1	<i>Hel1_251a</i>
NP_001104970.1	gene="STM1"; stomatin-like protein [Zea mays].	stomatin-like protein	1	<i>Hel1_225a(5'_1)</i>
NP_001105843.1	gene="stv2"; sialyltransferase like protein [Zea mays].	sialyltransferase like protein	1	<i>Hel1_219a</i>
AAS77569.1	gene="sugary2"; starch synthase IIa [Zea mays].	starch synthase IIa	1	<i>Hel1_208a</i>
NP_563981.1	gene="TPL/WSIP1"; TPL/WSIP1 (WUS-INTERACTING PROTEIN 1); protein binding [Arabidopsis thaliana].	WUS-INTERACTING PROTEIN 1	1	<i>Hel1_240a(3'_1)</i>
NP_001105902.1	gene="vp14"; viviparous14 [Zea mays].	viviparous14	2	<i>Hel1_287a; Hel1_295a</i>
AAL73532.1	gene="Z195D10.3"; ornithine carbamoyltransferase [Zea mays].	ornithine carbamoyltransferase [Zea mays].	6	<i>Hel1_117a,b; Hel1_123a,b; Hel1_226a; Hel1_279a</i>
CAH67432.1	H0305E08.3 [Oryza sativa (indica cultivar-group)].	Protein of unknown function (DUF295)	1	<i>Hel1_286a</i>
AAQ06294.1	hypothetical protein [Zea mays].	gene="9C20.7"	2	<i>Hel1_206a; Hel1_213a</i>
NP_001130084.1	hypothetical protein LOC100191177 [Zea mays].	hypothetical protein LOC100191177 [Zea mays].	1	<i>Hel1_300a</i>

NP_001130289.1	hypothetical protein LOC100191383 [Zea mays].	hypothetical protein LOC100191383 [Zea mays].	1	<i>Hel1_301a</i>
NP_001130946.1	hypothetical protein LOC100192051 [Zea mays].	hypothetical protein LOC100192051	1	<i>Hel1_287a</i>
NP_001131017.1	hypothetical protein LOC100192365 [Zea mays].	hypothetical protein LOC100192365 [Zea mays].	1	<i>Hel1_290a</i>
EAY74021.1	hypothetical protein Osl_001868 [Oryza sativa (indica cultivar-group)].	Gene Ontology: GO:0016491 oxidoreductase activity	1	<i>Hel1_122a</i>
EAY92207.1	hypothetical protein Osl_013440 [Oryza sativa (indica cultivar-group)].	similar to RNA sequence, EST similar to Arabidopsis Gene Ontology: GO:0005524 ATP binding	1	<i>Hel1_206a</i>
EAY98622.1	hypothetical protein Osl_019855 [Oryza sativa (indica cultivar-group)].	hypothetical protein	4	<i>Hel1_101a,b,c,d</i>
EAZ03354.1	hypothetical protein Osl_024586 [Oryza sativa (indica cultivar-group)].	hypothetical protein	1	<i>Hel1_262a</i>
EAZ06454.1	hypothetical protein Osl_027686 [Oryza sativa (indica cultivar-group)].	hypothetical protein Osl_027686 [Oryza sativa (indica cultivar-group)].	1	<i>Hel1_284a</i>
EAZ10988.1	hypothetical protein OsJ_000813 [Oryza sativa (japonica cultivar-group)].	hypothetical protein OsJ_000813 [Oryza sativa (japonica cultivar-group)].	1	<i>Hel1_250a</i>
EAZ11099.1	hypothetical protein OsJ_000924 [Oryza sativa (japonica cultivar-group)].	<399..443 /region_name="DUF1771" /note="Domain of unknown function (DUF1771) 451..523 /region_name="Smr" /note="Smr domain. This family includes the Smr (Small MutS Related) proteins, and the C-terminal region of the MutS2 protein	2	<i>Hel1_274a,b</i>

EAZ21463.1	hypothetical protein OsJ_004946 [Oryza sativa (japonica cultivar-group)].	497..759 /region_name="SNF2_N" /note="SNF2 family N-terminal domain. This domain is found in proteins involved in a variety of processes including transcription regulation	1	<i>Hel1_264a</i>
EAZ16192.1	hypothetical protein OsJ_030401 [Oryza sativa (japonica cultivar-group)].	168..299 /region_name="35EXOc" /note="3'-5' exonuclease. 350..419 /region_name="HRDC"/note="HRDC domain. The HRDC (Helicase and RNase D C-terminal) domain has a putative role in nucleic acid binding.	1	<i>Hel1_275a</i>
AAL73532.1	hypothetical protein S250_18C08.21 [Sorghum bicolor].	locus_tag="S250_18C08.21"	1	<i>Hel1_296a</i>
NP_565023.1	inositol polyphosphate 5-phosphatase, putative [Arabidopsis thaliana].	similar to IP5PI (INOSITOL POLYPHOSPHATE 5-PHOSPHATASE I), inositol-polyphosphate 5-phosphatase [Arabidopsis thaliana] (TAIR:AT1G34120.1)	1	<i>Hel1_263a</i>
EAY88946.1	locus_tag="OsI_010179"; hypothetical protein OsI_010179 [Oryza sativa (indica cultivar-group)].	hypothetical protein	1	<i>Hel1_208a</i>
EAZ24978.1	locus_tag="OsJ_008461"; hypothetical protein OsJ_008461 [Oryza sativa (japonica cultivar-group)].	hypothetical protein	1	<i>Hel1_237a(5'_1)</i>
EAZ25028.1	locus_tag="OsJ_008511"; hypothetical protein OsJ_008511 [Oryza sativa (japonica cultivar-group)].	hypothetical protein OsJ_008511	1	<i>Hel1_240a(3'_1)</i>
EAZ44788.1	locus_tag="OsJ_028271"; hypothetical protein OsJ_028271 [Oryza sativa (japonica cultivar-group)].	hypothetical protein	1	<i>Hel1_237a(5'_1)</i>

AAT42178.1	locus_tag="Z147J15.26"; putative casein kinase I [Zea mays].	putative casein kinase I	1	<i>Hel1_307a</i>
AAT08010.1	locus_tag="Z438D03.7"; putative kinase [Zea mays].	putative kinase	2	<i>Hel1_226a; Hel1_235a</i>
NP_001041749.1	Os01g0102500 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_297a(5'_1)</i>
NP_001042010.1	Os01g0146700 [Oryza sativa (japonica cultivar-group)].	Integrase, catalytic region domain containing protein	1	<i>Hel1_295a</i>
NP_001042146.1	Os01g0171000 [Oryza sativa (japonica cultivar-group)].	BRASSINOSTEROID INSENSITIVE 1-associated receptor kinase 1 precursor (EC 2.7.1.37) (BRI1-associated receptor kinase 1) (Somatic embryogenesis receptor-like kinase 3)	1	<i>Hel1_282a</i>
NP_001042185.1	Os01g0177200 [Oryza sativa (japonica cultivar-group)].	Ubiquitin-specific protease 14	1	<i>Hel1_268a</i>
NP_001042190.1	Os01g0178200 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function DUF92 family protein	1	<i>Hel1_291a(5'_1)</i>
NP_001042198.1	Os01g0179300 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_308a</i>
NP_001042242.1	Os01g0185900 [Oryza sativa (japonica cultivar-group)].	WRKY transcription factor 1 (WRKY DNA-binding protein 1) (Zinc-dependent activator protein 1) (Transcription factor ZAP1)	1	<i>Hel1_236a</i>
NP_001042313.1	Os01g0200000 [Oryza sativa (japonica cultivar-group)].	Autophagy 3	3	<i>Hel1_107a,b,c</i>
NP_001042487.1	Os01g0229500 [Oryza sativa (japonica cultivar-group)].	Thioesterase superfamily domain containing protein	1	<i>Hel1_233a(3'_2)</i>
NP_001042722.1	Os01g0275600 [Oryza sativa (japonica cultivar-group)].	Argonaute 4 protein	1	<i>Hel1_308a</i>
NP_001042890.1	Os01g0321300 [Oryza sativa (japonica cultivar-group)].	SecA protein family protein	1	<i>Hel1_296a</i>
NP_001043027.1	Os01g0362100 [Oryza sativa (japonica cultivar-group)].	Esterase/lipase/thioesterase domain containing protein	1	<i>Hel1_101d</i>

NP_001043123.1	Os01g0496900 [Oryza sativa (japonica cultivar-group)].	P-type trefoil domain containing protein	1	<i>Hel1_225a(5'_1)</i>
NP_001043227.1	Os01g0526200 [Oryza sativa (japonica cultivar-group)]	Conserved hypothetical protein supported by AK063442.	1	<i>Hel1_100f</i>
NP_001043259.1	Os01g0536000 [Oryza sativa (japonica cultivar-group)].	Serine/threonine protein kinase SOS2 (CBL-interacting protein kinase 24)	1	<i>Hel1_248a(3'_2)</i>
NP_001043317.1	Os01g0554100 [Oryza sativa (japonica cultivar-group)].	RNA-directed DNA polymerase (Reverse transcriptase) domain containing protein; The start codon is not identified.	1	<i>Hel1_285a(3'_2)</i>
NP_001043333.1	Os01g0558200 [Oryza sativa (japonica cultivar-group)].	Glu/Leu/Phe/Val dehydrogenase family protein	1	<i>Hel1_286a</i>
NP_001043473.1	Os01g0595900 [Oryza sativa (japonica cultivar-group)].	Cyclin-like F-box domain containing protein		
NP_001043564.1	Os01g0613900 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function UPF0052 and CofD family protein	1	<i>Hel1_254a</i>
NP_001043610.1	Os01g0622300 [Oryza sativa (japonica cultivar-group)].	Uroporphyrinogen decarboxylase (At3g14930)	1	<i>Hel1_100e</i>
NP_001043775.1	Os01g0660800 [Oryza sativa (japonica cultivar-group)].	3'-5' exonuclease domain containing protein	1	<i>Hel1_206a</i>
NP_001043847.1	Os01g0675700 [Oryza sativa (japonica cultivar-group)]	Auxin-responsive protein IAA14 (Indoleacetic acid-induced protein 14) (SOLITARY-ROOT protein)	4	<i>Hel1_100a,b,c</i>
NP_001043884.1	Os01g0681900 [Oryza sativa (japonica cultivar-group)].	Glutamate synthase [NADH], chloroplast precursor (EC 1.4.1.14) (NADH- GOGAT)	1	<i>Hel1_276a(3'_1)</i>
NP_001043991.1	Os01g0701900 [Oryza sativa (japonica cultivar-group)].	Phosphatidylinositol transfer-like protein III	1	<i>Hel1_289a</i>
NP_001044072.1	Os01g0716800 [Oryza sativa (japonica cultivar-group)].	Endonuclease/exonuclease/phosphatase family protein	1	<i>Hel1_251a</i>
NP_001044297.1	Os01g0757800 [Oryza sativa (japonica cultivar-group)].	UMUC-like DNA-repair protein family protein	1	<i>Hel1_225a(5'_1)</i>

NP_001044360.1	Os01g0767100 [Oryza sativa (japonica cultivar-group)].	Lysosomal Pro-X carboxypeptidase	2	<i>Hel1_123a,b</i>
NP_001044446.1	Os01g0782200 [Oryza sativa (japonica cultivar-group)].	Diacylglycerol kinase, catalytic region domain containing protein	1	<i>Hel1_253a</i>
NP_001044504.1	Os01g0794500 [Oryza sativa (japonica cultivar-group)].	Protein translation factor SU11 homolog (GOS2 protein)	3	<i>Hel1_102a,b,c</i>
NP_001044538.1	Os01g0801100 [Oryza sativa (japonica cultivar-group)].	Apurinic endonuclease-redox protein (DNA-(apurinic or apyrimidinic site) lyase) (EC 4.2.99.18)	1	<i>Hel1_263a</i>
NP_001044618.1	Os01g0816400 [Oryza sativa (japonica cultivar-group)].	Microtubule bundling polypeptide TMBP200	1	<i>Hel1_291a(5'_2)</i>
NP_001044687.1	Os01g0829100 [Oryza sativa (japonica cultivar-group)].	Major sperm protein domain containing protein	1	<i>Hel1_114d</i>
NP_001044708.1	Os01g0832900 [Oryza sativa (japonica cultivar-group)].	Ser-Thr protein kinase-like protein	1	<i>Hel1_264a</i>
NP_001044710.1	Os01g0833100 [Oryza sativa (japonica cultivar-group)].	NLI interacting factor domain containing protein	1	<i>Hel1_234a</i>
NP_001044881.1	Os01g0862300 [Oryza sativa (japonica cultivar-group)].	Sorting nexin 1	1	<i>Hel1_210a</i>
NP_001044919.1	Os01g0868200 [Oryza sativa (japonica cultivar-group)].	Zn-finger, DHHC type domain containing protein	1	<i>Hel1_237a(5'_1)</i>
NP_001045118.1	Os01g0902700 [Oryza sativa (japonica cultivar-group)].	TGF-beta receptor, type I/II extracellular region family protein	1	<i>Hel1_280a</i>
NP_001045299.1	Os01g0932600 [Oryza sativa (japonica cultivar-group)].	BTB/POZ domain containing protein	1	<i>Hel1_265a</i>
NP_001045645.1	Os02g0109800 [Oryza sativa (japonica cultivar-group)].	TPR-like domain containing protein	1	<i>Hel1_268a</i>
NP_001045848.1	Os02g0139700 [Oryza sativa (japonica cultivar-group)].	Cycloartenol synthase (EC 5.4.99.8)	2	<i>Hel1_111a,b</i>
NP_001046054.1	Os02g0175400 [Oryza sativa (japonica cultivar-group)].	Vacuolar proton-ATPase	1	<i>Hel1_267a</i>
NP_001046138.1	Os02g0189000 [Oryza sativa (japonica cultivar-group)].	Chloroplast 30S ribosomal protein S21 (Fragment)	2	<i>Hel1_272a,b</i>

NP_001046241.1	Os02g0204000 [Oryza sativa (japonica cultivar-group)].	TPR-like domain containing protein	1	<i>Hel1_249a</i>
NP_001046379.1	Os02g0234300 [Oryza sativa (japonica cultivar-group)].	The start codon is not identified.U box domain containing protein	1	<i>Hel1_212a</i>
NP_001046389.1	Os02g0236100 [Oryza sativa (japonica cultivar-group)].	SERK1 (Fragment)	1	<i>Hel1_108a</i>
NP_001046573.1	Os02g0285800 [Oryza sativa (japonica cultivar-group)].	GTP-binding protein TypA family protein	3	<i>Hel1_100a,b,c</i>
NP_001046702.1	Os02g0325600 [Oryza sativa (japonica cultivar-group)].	Phosphate starvation regulator protein (Regulatory protein of P- starvation acclimation response Psr1)	1	<i>Hel1_250a</i>
NP_001046842.1	Os02g0475300 [Oryza sativa (japonica cultivar-group)].	Membrane attack complex component/perforin/complement C9 family protein	3	<i>Hel1_237a; Hel1_250a; Hel1_297a</i>
NP_001047132.1	Os02g0556700 [Oryza sativa (japonica cultivar-group)].	T-complex 11 family protein	1	<i>Hel1_264a</i>
NP_001047196.1	Os02g0572600 [Oryza sativa (japonica cultivar-group)].	Protein kinase PKN/PRK1, effector domain containing protein	1	<i>Hel1_232a</i>
NP_001047285.1	Os02g0590800 [Oryza sativa (japonica cultivar-group)].	Protein kinase domain containing protein	1	<i>Hel1_308a</i>
NP_001047288.1	Os02g0591700 [Oryza sativa (japonica cultivar-group)].	Ribosomal protein L6 (Fragment)	1	<i>Hel1_260a</i>
NP_001047550.1	Os02g0641000 [Oryza sativa (japonica cultivar-group)].	Transcription factor L2	1	<i>Hel1_262a</i>
NP_001047721.1	Os02g0675700 [Oryza sativa (japonica cultivar-group)].	Putative methyltransferase DUF248 family protein	1	<i>Hel1_258a</i>
NP_001047756.1	Os02g0683900 [Oryza sativa (japonica cultivar-group)].	THH1	1	<i>Hel1_126a</i>
NP_001048014.1	Os02g0730500 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_223a</i>
NP_001048067.1	Os02g0739400 [Oryza sativa (japonica cultivar-group)].	Avr9/Cf-9 rapidly elicited protein 231 precursor	3	<i>Hel1_102a,b,c</i>

NP_001048086.1	Os02g0742000 [Oryza sativa (japonica cultivar-group)].	Bromo adjacent region domain containing protein	1	<i>Hel1_286a</i>
NP_001048242.1	Os02g0769200 [Oryza sativa (japonica cultivar-group)].	Peptidoglycan-binding LysM domain containing protein	1	<i>Hel1_239a(5'_1)</i>
NP_001048267.1	Os02g0773300 [Oryza sativa (japonica cultivar-group)].	Pyridoxal phosphate-dependent deaminase family protein	1	<i>Hel1_284a</i>
NP_001048291.1	Os02g0777700 [Oryza sativa (japonica cultivar-group)].	Myosin ab initio prediction with EST support	3	<i>Hel1_116a,b,c</i>
NP_001048326.1	Os02g0784100 [Oryza sativa (japonica cultivar-group)].	Integrase, catalytic region domain containing protein	1	<i>Hel1_200a</i>
NP_001048351.1	Os02g0789100 [Oryza sativa (japonica cultivar-group)].	Cyclic nucleotide-binding domain containing protein	1	<i>Hel1_220a</i>
NP_001048355.1	Os02g0790500 [Oryza sativa (japonica cultivar-group)].	Glycosyl transferase, family 20 domain containing protein	1	<i>Hel1_217a</i>
NP_001048559.1	Os02g0822400 [Oryza sativa (japonica cultivar-group)].	No apical meristem (NAM) protein domain containing protein	2	<i>Hel1_108a,b</i>
NP_001048568.1	Os02g0823300 [Oryza sativa (japonica cultivar-group)].	Zn-finger, RING domain containing protein	1	<i>Hel1_229a</i>
NP_001048587.1	Os02g0826500 [Oryza sativa (japonica cultivar-group)].	ATPase components of ABC transporters with duplicated ATPase domains	1	<i>Hel1_100f</i>
NP_001048697.1	Os03g0107900 [Oryza sativa (japonica cultivar-group)].	Exostosin-like family protein	4	<i>Hel1_110a,b,c,d</i>
NP_001048975.1	Os03g0150200 [Oryza sativa (japonica cultivar-group)].	Ethylene-responsive element binding protein	1	<i>Hel1_287a</i>
NP_001049022.1	Os03g0158500 [Oryza sativa (japonica cultivar-group)].	YT521-B-like protein family protein		<i>Hel1_257a(5'_1)</i>
NP_001049028.1	Os03g0159200 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function XS domain containing protein	1	<i>Hel1_222a</i>
NP_001049428.1	Os03g0224300 [Oryza sativa (japonica cultivar-group)].	Glycosyl transferase, family 20 domain containing protein	1	<i>Hel1_265a</i>
NP_001049500.1	Os03g0238600 [Oryza sativa (japonica cultivar-group)].	Purple acid phosphatase		<i>Hel1_257a(5'_1)</i>
NP_001049589.1	Os03g0254900 [Oryza sativa (japonica cultivar-group)].	The start codon is not identified. Zn-finger, RING domain containing protein	1	<i>Hel1_221a</i>

NP_001049598.1	Os03g0256400 [Oryza sativa (japonica cultivar-group)].	Imidazole glycerol phosphate synthase, glutamine amidotransferase subunit family protein	2	<i>Hel1_209a; Hel1_251a</i>
NP_001049651.1	Os03g0265700 [Oryza sativa (japonica cultivar-group)].	SH3 domain containing protein	1	<i>Hel1_264a</i>
NP_001049684.1	Os03g0270200 [Oryza sativa (japonica cultivar-group)].	SRm160/300 splicing coactivator (Fragment)	1	<i>Hel1_219a</i>
NP_001049717.1	Os03g0277000 [Oryza sativa (japonica cultivar-group)].	GDP dissociation inhibitor protein OsGDI1	2	<i>Hel1_111a,b</i>
NP_001049744.1	Os03g0281600 [Oryza sativa (japonica cultivar-group)].	Ca ²⁺ -ATPase; The stop codon is not identified.	1	<i>Hel1_271a</i>
NP_001049757.1	Os03g0283800 [Oryza sativa (japonica cultivar-group)].	RabGAP/TBC domain containing protein	1	<i>Hel1_299a(3'_1)</i>
NP_001049762.1	Os03g0284500 [Oryza sativa (japonica cultivar-group)].	HAD-superfamily subfamily IIA hydrolase, CECR5 protein	2	<i>Hel1_219a; Hel1_264a</i>
NP_001049853.1	Os03g0300000 [Oryza sativa (japonica cultivar-group)].	Xyloglucan 6-xylosyltransferase (EC 2.4.2.39) (AtXT1)	1	<i>Hel1_275a</i>
NP_001049854.1	Os03g0300100 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_275a</i>
NP_001049874.1	Os03g0303100 [Oryza sativa (japonica cultivar-group)].	Hypothetical protein supported by AK071041"	1	<i>Hel1_248a(3'_1)</i>
NP_001050052.1	Os03g0337900 [Oryza sativa (japonica cultivar-group)].	Fumarate hydratase 2, chloroplast precursor (EC 4.2.1.2) (Fumarase 2). Splice isoform 3	1	<i>Hel1_208a</i>
NP_001050112.1	Os03g0350100 [Oryza sativa (japonica cultivar-group)].	SAR DNA-binding protein-2 The stop codon is not identified.	3	<i>Hel1_102a,b,c</i>
NP_001050132.1	Os03g0355200 [Oryza sativa (japonica cultivar-group)].	Splicing factor motif domain containing protein	1	<i>Hel1_263a</i>
NP_001050241.1	Os03g0381300 [Oryza sativa (japonica cultivar-group)].	HSP20-like chaperone domain containing protein	1	<i>Hel1_282a</i>
NP_001050422.1	Os03g0430000 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_299a(3'_2)</i>
NP_001050612.1	Os03g0598800 [Oryza sativa (japonica cultivar-group)].	60S ribosomal protein L15	1	<i>Hel1_211a</i>

NP_001050655.1	Os03g0611200 [Oryza sativa (japonica cultivar-group)].	Aldo/keto reductase family protein	1	<i>Hel1_211a</i>
NP_001050779.1	Os03g0648400 [Oryza sativa (japonica cultivar-group)].	DnaJ protein homolog ANJ1	3	<i>Hel1_115a,b,c</i>
NP_001050878.1	Os03g0673100 [Oryza sativa (japonica cultivar-group)].	Homeotic protein knotted-1 (TKN1)	2	<i>Hel1_286a; Hel1_300a</i>
NP_001050955.1	Os03g0691500 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein 173..>487 /region_name="Smc" /note="Chromosome segregation ATPases	1	<i>Hel1_253a</i>
NP_001051130.1	Os03g0725400 [Oryza sativa (japonica cultivar-group)].	WD-repeat protein 5 (WD-repeat protein BIG-3)	1	<i>Hel1_281a</i>
NP_001051190.1	Os03g0736000 [Oryza sativa (japonica cultivar-group)].	NOT2/NOT3/NOT5 family protein The start codon is not identified.	1	<i>Hel1_269a</i>
NP_001051202.1	Os03g0737400 [Oryza sativa (japonica cultivar-group)].	Magnesium-dependent phosphatase-1 family protein	1	<i>Hel_252a</i>
NP_001051237.1	Os03g0744300 [Oryza sativa (japonica cultivar-group)].	Protein kinase domain containing protein The start codon is not identified.	1	<i>Hel1_244a</i>
NP_001051250.1	Os03g0746500 [Oryza sativa (japonica cultivar-group)].	RNA helicase like protein	2	<i>Hel1_120a,b</i>
NP_001051279.1	Os03g0749900 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_203a</i>
NP_001051331.1	Os03g0758300 [Oryza sativa (japonica cultivar-group)].	Cyclic nucleotide-gated ion channel 2 (AtCNGC2) (Cyclic nucleotide-and calmodulin-regulated ion channel 2) (DEFENSE NO DEATH 1)	2	<i>Hel1_200a; Hel1_269a</i>
NP_001051455.1	Os03g0781000 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein 92 family protein The start codon is not identified.	1	<i>Hel1_273a</i>
NP_001051497.1	Os03g0787300 [Oryza sativa (japonica cultivar-group)].	DnaJ protein homolog (DNAJ-1);	2	<i>Hel1_115d,e</i>
NP_001051520.1	Os03g0791500 [Oryza sativa (japonica cultivar-group)].	Synaptobrevin family protein	1	<i>Hel1_231a</i>

NP_001051558.1	Os03g0796900 [Oryza sativa (japonica cultivar-group)].	BZIP protein	1	<i>Hel1_297a(5'_1)</i>
NP_001051655.1	Os03g0809100 [Oryza sativa (japonica cultivar-group)].	Major facilitator superfamily protein	1	<i>Hel1_201a</i>
NP_001051697.1	Os03g0816900 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_300a</i>
NP_001051723.1	Os03g0820900 [Oryza sativa (japonica cultivar-group)].	Cellular retinaldehyde-binding)/triple function, C-terminal domain containing protein	1	<i>Hel1_210a</i>
NP_001051736.1	Os03g0822700 [Oryza sativa (japonica cultivar-group)].	ARM repeat fold domain containing protein	1	<i>Hel1_124a</i>
NP_001051790.1	Os03g0830900 [Oryza sativa (japonica cultivar-group)].	Lipase, class 3 family protein	1	<i>Hel1_295a</i>
NP_001051902.1	Os03g0850000 [Oryza sativa (japonica cultivar-group)].	Short-chain dehydrogenase/reductase SDR family protein	1	<i>Hel1_127a</i>
NP_001052155.1	Os04g0174800 [Oryza sativa (japonica cultivar-group)].	Protein prenyltransferase domain containing protein	1	<i>Hel1_108b</i>
NP_001052435.1	Os04g0310500 [Oryza sativa (japonica cultivar-group)].	Mitochondrial ribosome domain containing protein	3	<i>Hel1_116a,b,c</i>
NP_001052458.1	Os04g0320200 [Oryza sativa (japonica cultivar-group)].	TPR-like domain containing protein	1	<i>Hel1_301a</i>
NP_001052787.1	Os04g0421900 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	3	<i>Hel1_102a,b,c</i>
NP_001052829.1	Os04g0432200 [Oryza sativa (japonica cultivar-group)].	DEAD/DEAH box helicase, N-terminal domain containing protein	1	<i>Hel1_275a</i>
NP_001052982.1	Os04g0459000 [Oryza sativa (japonica cultivar-group)].	MDR-like ABC transporter	4	<i>Hel1_102a,b,c; Hel1_109a</i>
NP_001053236.1	Os04g0502800 [Oryza sativa (japonica cultivar-group)].	Nodulin-like protein	1	<i>Hel1_285a(3'_2)</i>
NP_001053259.1	Os04g0506800 [Oryza sativa (japonica cultivar-group)].	Glycosyl transferase, family 29 protein	2	<i>Hel1_115d,e</i>

NP_001054020.1	Os04g0636700 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function DUF618 domain containing protein	1	<i>Hel1_203a</i>
NP_001054048.1	Os04g0643100 [Oryza sativa (japonica cultivar-group)].	Vacuolar ATP synthase subunit D (EC 3.6.3.14) (V-ATPase D subunit) (Vacuolar proton pump D subunit)	1	<i>Hel1_268a</i>
NP_001054071.1	Os04g0647800 [Oryza sativa (japonica cultivar-group)].	Glycerol kinase 2	1	<i>Hel1_204a</i>
NP_001054142.1	Os04g0660200 [Oryza sativa (japonica cultivar-group)].	ABC-1 family protein	1	<i>Hel1_231a</i>
NP_001054236.1	Os04g0674100 [Oryza sativa (japonica cultivar-group)].	TPR-like domain containing protein	1	<i>Hel1_286a</i>
NP_001054308.1	Os04g0684200 [Oryza sativa (japonica cultivar-group)].	Protein kinase domain containing protein;	4	<i>Hel1_120a,b; Hel1_234a; Hel1_260a</i>
NP_001054329.1	Os04g0686700 [Oryza sativa (japonica cultivar-group)].	Cyclin-like F-box domain containing protein	1	<i>Hel1_290a</i>
NP_001054415.1	Os05g0106000 [Oryza sativa (japonica cultivar-group)].	Zn-finger, C2H2 type domain containing protein	1	<i>Hel1_201a</i>
NP_001054539.1	Os05g0128400 [Oryza sativa (japonica cultivar-group)].	Metal tolerance protein 1	2	<i>Hel1_206a; Hel1_287a</i>
NP_001054667.1	Os05g0150600 [Oryza sativa (japonica cultivar-group)].	ATP-dependent DNA helicase RecQ family protein	3	<i>Hel1_109a,b; Hel1_250a</i>
NP_001054755.1	Os05g0168500 [Oryza sativa (japonica cultivar-group)].	Nonaspanin (TM9SF) family protein	2	<i>Hel1_112a,b</i>
NP_001054812.1	Os05g0181000 [Oryza sativa (japonica cultivar-group)].	Heat shock protein Hsp70 family protein	3	<i>Hel1_116a,b,c</i>
NP_001054858.1	Os05g0194600 [Oryza sativa (japonica cultivar-group)].	Peptidase M22, O-sialoglycoprotein family protein	1	<i>Hel1_284a</i>
NP_001055036.1	Os05g0256000 [Oryza sativa (japonica cultivar-group)].	TGF-beta receptor-interacting protein 1	1	<i>Hel1_244a(5'_1)</i>
NP_001055071.1	Os05g0274300 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_216a</i>
NP_001055073.1	Os05g0275000 [Oryza sativa (japonica cultivar-group)].	Protein prenyltransferase domain containing protein	1	<i>Hel1_297a(5'_2)</i>

NP_001055073.1	Os05g0275000 [Oryza sativa (japonica cultivar-group)].	Protein prenyltransferase domain containing protein	1	<i>Hel1_297a(5'_1)</i>
NP_001055172.1	Os05g0316000 [Oryza sativa (japonica cultivar-group)].	Zn-finger, RING domain containing protein	1	<i>Hel1_301a</i>
NP_001055303.1	Os05g0358500 [Oryza sativa (japonica cultivar-group)].	Protein phosphatase-like	84	<i>Hel1_122a; Hel1_226a; Hel1_262a; Hel1_279a; Hel1_298a; Hel1_105a-b4</i>
NP_001055652.1	Os05g0437300 [Oryza sativa (japonica cultivar-group)].	HnRNP-L/PTB/hephaestus splicing factor family protein	1	<i>Hel1_237a</i>
NP_001055719.1	Os05g0454400 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_305a</i>
NP_001055812.1	Os05g0471000 [Oryza sativa (japonica cultivar-group)].	Protein kinase domain containing protein	1	<i>Hel1_203a</i>
NP_001055944.1	Os05g0497600 [Oryza sativa (japonica cultivar-group)].	Ribosomal L11 methyltransferase family protein	1	<i>Hel1_265a</i>
NP_001056107.1	Os05g0527000 [Oryza sativa (japonica cultivar-group)].	UDP-glucuronosyl/UDP-glucosyltransferase family protein	1	<i>Hel1_238a</i>
NP_001056206.1	Os05g0543700 [Oryza sativa (japonica cultivar-group)].	Chaperone protein dnaJ (40 kDa heat shock chaperone protein) (HSP40)	1	<i>Hel1_264a</i>
NP_001056303.1	Os05g0559900 [Oryza sativa (japonica cultivar-group)].	region_name="Herpes_LMP1" /note="Herpesvirus latent membrane protein 1 (LMP1);	1	<i>Hel1_247a</i>
NP_001056342.1	Os05g0566400 [Oryza sativa (japonica cultivar-group)].	Blast and wounding induced mitogen-activated protein kinase	1	<i>Hel1_292a</i>
NP_001056433.1	Os05g0581800 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function DUF1296 family protein	1	<i>Hel1_219a</i>
NP_001056580.1	Os06g0110100 [Oryza sativa (japonica cultivar-group)].	OSEYA1	2	<i>Hel1_225a; Hel_252a</i>
NP_001056622.1	Os06g0116600 [Oryza sativa (japonica cultivar-group)].	Proteinase inhibitor, propeptide domain containing protein	1	<i>Hel1_236a</i>
NP_001056864.1	Os06g0158200 [Oryza sativa (japonica cultivar-group)].	/region_name="HS6ST" /note="Heparan sulfate 6-sulfotransferase (HS6ST)	1	<i>Hel1_301a</i>

NP_001057027.1	Os06g0191200 [Oryza sativa (japonica cultivar-group)].	Zn-finger, Ran-binding domain containing protein	1	<i>Hel1_124a</i>
NP_001057137.1	Os06g0215300 [Oryza sativa (japonica cultivar-group)].	ToIB, C-terminal domain containing protein	1	<i>Hel1_296a</i>
NP_001057284.1	Os06g0247500 [Oryza sativa (japonica cultivar-group)].	Pyrophosphate--fructose 6-phosphate 1-phosphotransferase beta subunit (EC 2.7.1.90) (PFP)	1	<i>Hel1_281a</i>
NP_001057406.1	Os06g0285900 [Oryza sativa (japonica cultivar-group)].	ARM repeat fold domain containing protein	1	<i>Hel_252a</i>
NP_001057591.1	Os06g0354500 [Oryza sativa (japonica cultivar-group)].	Acyl-CoA oxidase ACX3	1	<i>Hel1_308a</i>
NP_001057699.1	Os06g0498400 [Oryza sativa (japonica cultivar-group)].	region_name="PPDK_N" /note="Pyruvate phosphate dikinase, PEP/pyruvate binding domain.	1	<i>Hel1_210a</i>
NP_001057926.1	Os06g0574500 [Oryza sativa (japonica cultivar-group)].	Protein phosphatase 2A	1	<i>Hel1_240a(3'_1)</i>
NP_001057960.1	Os06g0589300 [Oryza sativa (japonica cultivar-group)].	Viral coat and capsid protein family protein	1	<i>Hel1_258a</i>
NP_001057997.1	Os06g0598900 [Oryza sativa (japonica cultivar-group)].	WD40-like domain containing protein	1	<i>Hel1_264a</i>
NP_001058116.1	Os06g0625900 [Oryza sativa (japonica cultivar-group)].	Potassium transporter 8 (AtPOT8) (AtHAK8)	1	<i>Hel1_285a(3'_1)</i>
NP_001058191.1	Os06g0645400 [Oryza sativa (japonica cultivar-group)].	Isoleucyl-tRNA synthetase	1	<i>Hel1_257a</i>
NP_001058442.1	Os06g0694400 [Oryza sativa (japonica cultivar-group)].	Hypothetical protein	1	<i>Hel1_309a</i>
NP_001058451.1	Os06g0695600 [Oryza sativa (japonica cultivar-group)].	Zn-finger, RING domain containing protein	1	<i>Hel1_284a</i>
NP_001058591.1	Os06g0716800 [Oryza sativa (japonica cultivar-group)].	Eukaryotic transcription factor, DNA-binding domain containing protein	1	<i>Hel1_234a</i>
NP_001058926.1	Os07g0158200 [Oryza sativa (japonica cultivar-group)].	TatD-related deoxyribonuclease family protein	7	<i>Hel1_100a,b,c; Hel1_116a,b,c</i>
NP_001058935.1	Os07g0159900 [Oryza sativa (japonica cultivar-group)].	Glutaredoxin domain containing protein;	1	<i>Hel1_229a</i>

NP_001059438.1	Os07g0408700 [Oryza sativa (japonica cultivar-group)].	Spermidine synthase 2 (EC 2.5.1.16) (Putrescine aminopropyltransferase 2) (SPDSY 2)	1	<i>Hel1_245a(3'_2)</i>
NP_001059624.1	Os07g0475900 [Oryza sativa (japonica cultivar-group)].	Amino acid-binding ACT domain containing protein	2	<i>Hel1_240a(3'_1); Hel1_278a</i>
NP_001059728.1	Os07g0503500 [Oryza sativa (japonica cultivar-group)].	UDP-glucuronosyl/UDP-glucosyltransferase family protein	4	<i>Hel1_110a,b,c,d</i>
NP_001059759.1	Os07g0511000 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_289a</i>
NP_001059785.1	Os07g0516600 [Oryza sativa (japonica cultivar-group)].	Multi antimicrobial extrusion protein MatE family protein	1	<i>Hel1_282a</i>
NP_001059920.1	Os07g0546100 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein supported by AK100024"	2	<i>Hel1_120a,b</i>
NP_001060009.1	Os07g0565200 [Oryza sativa (japonica cultivar-group)].	Cell differentiation protein rcd1; The start codon is not identified.	1	<i>Hel1_264a</i>
NP_001060014.1	Os07g0565700 [Oryza sativa (japonica cultivar-group)].	Alpha/beta hydrolase family protein	1	<i>Hel1_300a</i>
NP_001060055.1	Os07g0572000 [Oryza sativa (japonica cultivar-group)].	WD40-like domain containing protein		<i>Hel1_257a(5'_1)</i>
NP_001060150.1	Os07g0589400 [Oryza sativa (japonica cultivar-group)].	Quinonprotein alcohol dehydrogenase-like domain containing protein	1	<i>Hel1_234a</i>
NP_001060172.1	Os07g0596600 [Oryza sativa (japonica cultivar-group)].	Protein kinase domain containing protein	1	<i>Hel1_229a</i>
NP_001060300.1	Os07g0620400 [Oryza sativa (japonica cultivar-group)].	GTP-binding protein ATGB1 (GTP-binding protein-like) (At5g52210)	2	<i>Hel1_118a,b</i>
NP_001060436.1	Os07g0642400 [Oryza sativa (japonica cultivar-group)].	SNF2-related domain containing protein	1	<i>Hel1_126a</i>
NP_001060449.1	Os07g0644600 [Oryza sativa (japonica cultivar-group)].	Cytochrome P450 family protein	1	<i>Hel1_286a</i>
NP_001060510.1	Os07g0657200 [Oryza sativa (japonica cultivar-group)].	WD40-like domain containing protein	1	<i>Hel1_251a</i>

NP_001060538.1	Os07g0661500 [Oryza sativa (japonica cultivar-group)].	DDT domain containing protein	1	<i>Hel1_258a</i>
NP_001060547.1	Os07g0662900 [Oryza sativa (japonica cultivar-group)].	4-alpha-glucanotransferase (EC 2.4.1.25)	4	<i>Hel1_101a,b,c,d</i>
NP_001060637.1	Os07g0679000 [Oryza sativa (japonica cultivar-group)].	Potassium transporter 2 (AtPOT2) (AtKUP2) (AtKT2)	1	<i>Hel1_265a</i>
NP_001060729.1	Os07g0693400 [Oryza sativa (japonica cultivar-group)].	ARM repeat fold domain containing protein	1	<i>Hel1_240a(3'_1)</i>
NP_001060912.1	Os08g0128500 [Oryza sativa (japonica cultivar-group)].	60S ribosomal protein L37-A (L35) (YP55)	2	<i>Hel1_109a,b</i>
NP_001061297.1	Os08g0230200 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein supported by AK069639"	4	<i>Hel1_110a,b,c,d</i>
NP_001061540.1	Os08g0323000 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein supported by AK064573"	1	<i>Hel1_251a</i>
NP_001061581.1	Os08g0337700 [Oryza sativa (japonica cultivar-group)].	RabGAP/TBC domain containing protein	1	<i>Hel1_270a</i>
NP_001061823.1	Os08g0421800 [Oryza sativa (japonica cultivar-group)].	Mitogen-activated protein kinase kinase 1	2	<i>Hel1_114d; Hel1_124a</i>
NP_001061972.1	Os08g0459100 [Oryza sativa (japonica cultivar-group)].	Leucine-rich repeat, cysteine-containing containing protein	2	<i>Hel1_120a,b</i>
NP_001062139.1	Os08g0497300 [Oryza sativa (japonica cultivar-group)].	Cellular retinaldehyde binding/alpha-tocopherol transport family protein	1	<i>Hel1_126a</i>
NP_001062209.1	Os08g0510800 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	1	<i>Hel1_269a</i>
NP_001062394.1	Os08g0542700 [Oryza sativa (japonica cultivar-group)].	Ankyrin repeat containing protein	1	<i>Hel1_249a</i>
NP_001062427.1	Os08g0547200 [Oryza sativa (japonica cultivar-group)].	RabGAP/TBC domain containing protein	1	<i>Hel1_297a(5'_1)</i>
NP_001062802.1	Os09g0296900 [Oryza sativa (japonica cultivar-group)].	Peptidase S9A, prolyl oligopeptidase, N-terminal beta-propeller domain containing protein	1	<i>Hel1_232a</i>
NP_001105393.1	Os09g0297400 [Oryza sativa (japonica cultivar-group)].	Phosphate/phosphoenolpyruvate translocator	1	<i>Hel1_294a</i>

NP_001062976.1	Os09g0359900 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein supported by AK105521	1	<i>Hel1_276a(3'_1)</i>
NP_001063250.1	Os09g0434100 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein supported by AK070207"	1	<i>Hel1_248a(3'_1)</i>
NP_001063351.1	Os09g0454300 [Oryza sativa (japonica cultivar-group)].	Cyclin-like F-box domain containing protein	1	<i>Hel1_281a</i>
NP_001063397.1	Os09g0461900 [Oryza sativa (japonica cultivar-group)].	Esterase/lipase/thioesterase domain containing protein	1	<i>Hel1_201a</i>
NP_001063456.1	Os09g0474300 [Oryza sativa (japonica cultivar-group)].	Heat-shock protein precursor	1	<i>Hel1_288a(3'_1)</i>
NP_001063541.1	Os09g0492700 [Oryza sativa (japonica cultivar-group)].	3-hydroxy-3-methylglutaryl-coenzyme A reductase 1 (EC 1.1.1.34) (HMG- CoA reductase 1) (HMGR1)	4	<i>Hel1_100a,b,c,d</i>
NP_001063862.1	Os09g0550000 [Oryza sativa (japonica cultivar-group)].	Bromodomain containing protein	1	<i>Hel1_301a</i>
NP_001063899.1	Os09g0556500 [Oryza sativa (japonica cultivar-group)].	CysteinyI-tRNA synthetase, class Ia family protein	2	<i>Hel1_220a; Hel1_276a(3'_2)</i>
NP_001064140.1	Os10g0140200 [Oryza sativa (japonica cultivar-group)].	Glycoside hydrolase, family 38 domain containing protein	1	<i>Hel1_114d</i>
NP_001064280.1	Os10g0192300 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein	4	<i>Hel1_109a,b; Hel1_260a; Hel1_284a</i>
NP_001064388.1	Os10g0343200 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function DUF588 family protein	1	<i>Hel1_271a</i>
NP_001064470.1	Os10g0375600 [Oryza sativa (japonica cultivar-group)].	CG-1 domain containing protein	1	<i>Hel1_288a(3'_1)</i>
NP_001064496.1	Os10g0388600 [Oryza sativa (japonica cultivar-group)].	Peptidase C48, SUMO/Sentrin/Ubl1 family protein	1	<i>Hel1_256a</i>
NP_001064567.1	Os10g0407000 [Oryza sativa (japonica cultivar-group)].	Pectinesterase family protein	1	<i>Hel1_205a</i>
NP_001064986.1	Os10g0501500 [Oryza sativa (japonica cultivar-group)].	Protein of unknown function DUF607 family protein	4	<i>Hel1_100a,b,c</i>
NP_001065020.1	Os10g0508100 [Oryza sativa (japonica cultivar-group)].	Plant protein of unknown function DUF641 domain containing protein	1	<i>Hel1_202a</i>

NP_001065429.1	Os10g0567000 [Oryza sativa (japonica cultivar-group)].	Camphor resistance CrcB protein family protein	1	<i>Hel1_202a</i>
NP_001065837.1	Os11g0167200 [Oryza sativa (japonica cultivar-group)].	Hypothetical protein	1	<i>Hel1_210a</i>
NP_001067741.1	Os11g0303500 [Oryza sativa (japonica cultivar-group)].	Hypothetical protein supported by AK068734	2	<i>Hel1_118a,b</i>
NP_001067972.1	Os11g0516000 [Oryza sativa (japonica cultivar-group)].	Serine palmitoyltransferase	1	<i>Hel1_242a</i>
NP_001068067.1	Os11g0546900 [Oryza sativa (japonica cultivar-group)].	TaWIN1 The start codon is not identified.	3	<i>Hel1_114a,b,c</i>
NP_001068129.1	Os11g0573000 [Oryza sativa (japonica cultivar-group)].	Conserved hypothetical protein /note="Ubiquitin carboxyl-terminal hydrolase	1	<i>Hel_252a</i>
NP_001068278.1	Os11g0615700 [Oryza sativa (japonica cultivar-group)].	Proteasome subunit alpha type 5 (EC 3.4.25.1) (20S proteasome alpha subunit E) (20S proteasome subunit alpha-5)	1	<i>Hel1_287a</i>
NP_001068371.1	Os11g0648000 [Oryza sativa (japonica cultivar-group)].	Sodium/hydrogen exchanger subfamily protein	4	<i>Hel1_116a,b,c; Hel1_296a</i>
NP_001068399.1	Os11g0658800 [Oryza sativa (japonica cultivar-group)].	Glycoside hydrolase, family 28 protein	1	<i>Hel1_265a</i>
NP_001068408.1	Os11g0661200 [Oryza sativa (japonica cultivar-group)].	Heat shock protein DnaJ, N-terminal domain containing protein	1	<i>Hel1_237a(5'_1)</i>
NP_001068441.1	Os11g0673200 [Oryza sativa (japonica cultivar-group)].	Alpha-L-arabinofuranosidase/beta-D-xylosidase isoenzyme ARA-I	1	<i>Hel1_276a(3'_1)</i>
NP_001068490.1	Os11g0689400 [Oryza sativa (japonica cultivar-group)].	RNA helicase, DRH1	1	<i>Hel1_208a</i>
NP_001068533.1	Os11g0702700 [Oryza sativa (japonica cultivar-group)].	Homeodomain-like containing protein	1	<i>Hel1_265a</i>
NP_001066135.1	Os12g0143200 [Oryza sativa (japonica cultivar-group)].	SPIa/Ryanodine receptor SPRY domain containing protein	1	<i>Hel1_204a</i>
NP_001066238.1	Os12g0165000 [Oryza sativa (japonica cultivar-group)].	WD40-like domain containing protein	1	<i>Hel1_209a</i>

NP_001066993.1	Os12g0554800 [Oryza sativa (japonica cultivar-group)].	Polygalacturonase-like protein	1	<i>Hel1_301a</i>
NP_001067191.1	Os12g0597100 [Oryza sativa (japonica cultivar-group)].	Meprin/TRAF-like domain-containing protein (Fragment)	1	<i>Hel1_202a</i>
NP_181461.1	PGP1/PGPS1/PGS1 (PHOSPHATIDYLGLYCEROLPHOSPHATE SYNTHASE 1); CDP-alcohol phosphatidyltransferase/ CDP-diacylglycerol- glycerol-3-phosphate 3-phosphatidyltransferase [Arabidopsis thaliana].	gene="PGP1/PGPS1/PGS1"	1	<i>Hel1_291a(5'_2)</i>
BAC75570.1	PHD-type zinc finger protein-like [Oryza sativa Japonica Group].	PHD-type zinc finger protein-like	3	<i>Hel1_107a,b,c</i>
AAP12994.1	putative beige protein [Oryza sativa (japonica cultivar-group)].	putative beige protein	1	<i>Hel1_236a</i>
AAQ56500.1	putative DNA-binding protein [Oryza sativa (japonica cultivar-group)].	putative DNA-binding protein	1	<i>Hel1_285a(3'_1)</i>
AAT08013.1	putative growth-regulating factor 1 [Zea mays]	similar to Sorghum bicolor putative growth-regulating factor 1 encoded by AF466199"	5	<i>Hel1_101a,b,c,d; Hel1_229a</i>
AAT08010.1	putative kinase [Zea mays].	similar to Arabidopsis thaliana receptor-type protein kinase LRK1 encoded by X95909.	9	<i>Hel1_101a,b,c,d; Hel1_122a; Hel1_226a; Hel1_235a; Hel1_246a; Hel1_279a</i>
ABB03723.1	putative ribosomal protein [Sorghum bicolor].	Ribosomal protein S5	1	<i>Hel1_307a</i>
Q0DY59.2	RecName: Full=3-hydroxy-3-methylglutaryl-coenzyme A reductase 1; Short=HMG-CoA reductase 1.Oryza sativa Japonica Group	HMG-CoA reductase 1	1	<i>Hel1_291a(5'_2)</i>
NP_001030921.1	RNA binding [Arabidopsis thaliana].	similar to zinc finger (CCCH-type) family protein / RNA recognition motif (RRM)-containing protein [Arabidopsis thaliana]	1	<i>Hel1_276a(3'_1)</i>
ABO32298.1	S-adenosylmethionine decarboxylase [Saccharum officinarum].	gene="SAMDC"	1	<i>Hel1_253a</i>
NP_172333.1	thioredoxin family protein [Arabidopsis thaliana].	Identical to Thioredoxin-like 1 [Arabidopsis thaliana]	1	<i>Hel1_222a</i>
ABX82685.1	transposase [Zea mays subsp. parviglumis].	transposase	1	<i>Hel1_225a(5'_1)</i>

ABE77201.1	unknown [Sorghum bicolor].	expressed protein, Myb/SANT domain	1	<i>Hel1_204a</i>
ACF84625.1	unknown [Zea mays]	unknown [Zea mays]	3	<i>Hel1_100a,b,c</i>
ACF87439.1	unknown [Zea mays]	unknown [Zea mays]	1	<i>Hel1_100d</i>
AAT39464.1	unknown [Zea mays].	similar to sorhum gene SB35P03.21 for		
AAV64202.1	unknown [Zea mays].	unknown protein encoded by AF466199	2	<i>Hel1_124a; Hel1_279a</i>
ACF78445.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_124a</i>
ACF78564.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_212a</i>
ACF78648.1	unknown [Zea mays].	unknown	1	<i>Hel1_219a</i>
ACF78732.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_126a</i>
ACF79179.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_216a</i>
ACF79333.1	unknown [Zea mays].	unknown [Zea mays].	2	<i>Hel1_103a,b</i>
ACF79640.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_258a</i>
ACF80302.1	unknown [Zea mays].	unknown [Zea mays].	2	<i>Hel1_118a,b</i>
ACF80487.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_231a(5'_1)</i>
ACF81183.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_233a(3'_2)</i>
ACF81969.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_248a(3'_1)</i>
ACF81992.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_203a</i>
ACF82193.1	unknown [Zea mays].	unknown [Zea mays].	3	<i>Hel1_122a; Hel1_246a;</i> <i>Hel1_279a</i>
ACF82242.1	unknown [Zea mays].	unknown [Zea mays].	2	<i>Hel1_223a; Hel1_231a(5'_1)</i>
ACF82358.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_126a</i>
ACF82809.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_220a</i>
ACF82936.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_124a</i>
ACF83068.1	unknown [Zea mays].	unknown [Zea mays].	2	<i>Hel1_119a,b</i>
ACF83223.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_122a</i>
ACF84400.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_200a</i>
ACF84691.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_209a</i>
ACF85427.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_291a(5'_1)</i>
ACF85966.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_297a(5'_2)</i>
ACF86951.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_300a</i>
ACF87360.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_263a</i>
ACF87373.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_283a</i>
ACF87484.1	unknown [Zea mays].	unknown [Zea mays].	2	<i>Hel1_120a,b</i>
			1	<i>Hel1_258a</i>

ACF87608.1	unknown [Zea mays].	unknown [Zea mays].	3	<i>Hel1_116a,b,c</i>
ACF87655.1	unknown [Zea mays].	unknown [Zea mays].	2	<i>Hel1_109a,b</i>
ACF87823.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_214a</i>
ACF88064.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_280a</i>
ACG24331.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_285a(3'_1)</i>
ACG27901.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_276a(3'_1)</i>
ACG28452.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_284a</i>
ACG30698.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_297a(5'_2)</i>
ACG32109.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_300a</i>
ACG39196.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_301a</i>
ACG40603.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_297a(5'_2)</i>
ACG46039.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_284a</i>
ACG46552.1	unknown [Zea mays].	unknown [Zea mays].	1	<i>Hel1_285a(3'_1)</i>
ABF98825.1	WD-40 repeat family protein, putative, expressed [Oryza sativa (japonica cultivar-group)].	WD-40 repeat family protein, putative, expressed [Oryza sativa (japonica cultivar-group)].	1	<i>Hel1_124a</i>
NP_176362.3	zinc ion binding [Arabidopsis thaliana].	similar to zinc finger (FYVE type) family protein [Arabidopsis]	1	<i>Hel1_216a</i>

* The abundant *Hel1_105* and *Hel1_106* subfamilies are highlighted in green and yellow, respectively.