

## List of genes postulated to be on pea LG III between *Fed 1* and just distal to *Egl 1*

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The table below presents the predicted order of genes and many pseudogenes on the upper 2/3rds of pea LG III based on Build 1 of *Medicago truncatula* chromosome 3 ([www.medicago.org/genome/downloads/Mt1/](http://www.medicago.org/genome/downloads/Mt1/)), the known order of genes on pea LG III and the high degree of conserved synteny known to exist between pea LG III and *M. truncatula* chromosome 3. Gaps between contigs in the *M. truncatula* build are usually designated by wide, shaded horizontal bars (some rearranging and combining of contigs is presented in this table as a result of apparent differences between the pea and *M. truncatula* chromosome maps and additional BLAST analysis of contig ends by the authors). The polarity of the gene sequence within a contig is usually not known relative to the polarity of the pea linkage group and, thus, has generally not been changed from that given in the *M. truncatula* build. Narrower, unshaded horizontal gaps in the table indicate breaks within the contig. The first column provides the gene symbol or Genbank accession for the pea ortholog of the *M. truncatula* gene listed in the third column. The second column provides the approximate distance from the top of pea LG III of the pea gene based on data generated from the J11794 x Slow population used to develop the consensus map for pea (<http://hermes.bionet.nsc.ru/pg/38>). Genes listed in bold in the third column have appropriate properties (relatively large size, relatively low copy number, presence of introns) for use as intron-targeted sequence tagged sites. Those genes in bold and underlined are particularly suitable for this purpose or have been used as STS markers. Build 2 of the *M. truncatula* genome has been released ([www.medicago.org/genome/downloads/Mt2/](http://www.medicago.org/genome/downloads/Mt2/)); however, the changes suggested by information presented in the new build are relatively minor and have not been incorporated into the table. A list of the abbreviations used in the table is provided at the end.

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
<b>Fed1</b>	<b>0</b>	
		Lectin-like receptor kinase
		<b><u>Hexose transporter</u></b>
		Myosin heavy chain-like
		<b>Isoflavone reductase like protein</b>
		Xyloglucan galactosyltransferase
		<b>Cyclin-like F box</b>
		<b>Cyclin-like F-box</b>
		<b><u>Cellulose synthase</u></b>
		<b>Dimethyladenosine transferase</b>
		PK
		<b><u>MYST-type acetyl transferase</u></b>
		<b>60S Ribosomal protein L11 (L5)</b>
		<b>Receptor-like kinase</b>
		PK, EGF-like
		ZFP
		PK, EGF-like
		<b>Tetrahydrofolate DH/cyclohydrolase</b>
<b>AB218759</b>		<b>Cytochrome P450</b>
		<b>Prefoldin</b>
		<b>Aminophospholipid ATPase</b>
X54844	---	<b><u>Beta tubulin</u></b>
		<b><u>TF E2F/dimerisation partner</u></b>
<b>Rb, AGLP</b>	<b>6</b>	

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		HMG-I and HMG-Y, DNA-binding
		Cytochrome P450
		<b>Kelch-repeat containing F-box protein--Saposin B</b>
		<b>Protein phosphatase 2C</b>
		<b>Ionotropic glutamate receptor</b>
M55147	9	<b><u>cpGlyceraldehyde-3-phosphate DH</u></b>
		<b>Mlo-related protein</b>
		<b>ZFP, DHHC-type</b>
		<b>Peptidylprolyl isomerase, FKBP-type</b>
		<b><u>Ribophorin I family</u></b>
		<b><u>General hexose transporter</u></b>
		<b>Peptidase C1A (CysPr1)</b>
		<b>General substrate transporter</b>
		<b>Phosphatidylinositol 4-kinase, putative</b>
		<b>BURP containing protein</b>
		<b>PK</b>
		<b>Adaptin, noncathrin coat protein</b>
		<b>Histone deacetylase superfamily</b>
		<b>Sugar transporter superfamily; major facilitator superfamily MFS_1</b>
		<b>GT, family 13</b>
		<b>Glycoside hydrolase; chitin-binding (chitinase)</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Phosphoesterase, DHHA1
		Glutamyl tRNA-reductase
		<u>Phosphoenolpyruvate carboxykinase</u>
		Beta-1,3-glucuronosyltransferase
		S25 ribosomal protein
		S-adenosyl-L methionine:salicylic acid carboxyl methyltransferase
AJ491794	---	<u>Bifunctional dihydrofolate reductase/thymidylate synthase</u>
		<u>Phosphatidylinositol transfer-like protein III</u>
		<u>Phosphatidylinositol transfer-like protein II</u>
		Terpene synthase-like
		H <sup>+</sup> -transporting two-sector ATPase, delta/epsilon subunit
		Inositol monophosphatase; Histidinol-phosphate phosphatase
		Kinesin-like protein
		Ethylene-forming dioxygenase
		Endo-1,4-beta gluconase
		Dihydrouridine synthase ZFP
		Purine/pyrimidine phosphoribosyl transferase
		Auxin responsive SAUR protein
		Calcium-binding EF-hand
		Carbohydrate-binding Phytochelatin synthetase-putative
		Purine nucleosidase, family 1
		GT
		Translocon-associated protein alpha subunit precursor
		Peptidyl-prolyl cis-trans isomerase, cyclophilin type
		Galactose-binding like Glycoside hydrolase, family 10
		<u>Beta galactosidase-like</u>
		Protein transporter
		Glutamate 1 semialdehyde aminotransferase
		<u>ATP-dependent helicase</u>
		Acetylglutamate kinase
		<u>Cyclic nucleotide-binding; cation channel</u>
		Protein of unknown function DUF581
		<u>60S Ribosomal protein L10</u>
		Protein prenyltransferase-like
TubA	18	Alpha tubulin
		<u>Carbohydrate kinase, FGGY</u>
		Sodium/hydrogen exchanger
		<u>Protein of unknown function DUF676</u>
		Amino acid permease AAP6
		<u>KH, type 1</u>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Protein of unknown function DUF676
		<u>Thiolase</u>
		<u>TPR repeat</u>
		PK
		<u>Pyrophosphate-dependent phosphofructokinase</u>
		Early nodulin 93
		Prefoldin; frigida-like
		<u>Arginyl-tRNA synthetase, class Ic</u>
		PAP/25A core; Poly(A) polymerase, RNA-binding region
		Receptor kinase LRR
		Amino acid permease AAP6
		Glycoside hydrolase, family 17; X8
		<u>Peptidase C19, ubiquitin carboxyl-terminal hydrolase 2</u>
		Protein of unknown function DUF239, plant
		<u>Plasma membrane H<sup>+</sup> ATPase</u>
		ZFP, RING-type
		Galactose oxidase, central Cyclin-like F-box
		DNA-binding WRKY
		ZFP, RING-type
		FAD dependent oxidoreductase
		FAD dependent oxidoreductase
		RNA-binding region RNP-1
		Ion transport protein
		GT, family 2
		UDP-glucuronic acid/UDP-N-acetylgalactosamine transporter
		<u>RNA-binding region RNP-1</u>
		PK
		PDI-like protein
		Auxin responsive SAUR protein
		26S proteasome subunit
		Calcium-binding EF-hand
		<u>No apical meristem protein</u>
		PK
		Dehydrin-responsive protein, BURP
		<u>FAD-dependent pyridine nucleotide-disulphide oxidoreductase</u>
		GTP-binding protein, HSR1-related
		Beta-Adaptin subunit, related
Rms1	20	<u>Carotenoid oxygenase</u>
		<u>Protein of unknown function DUF810</u>
		Regulator of chromosome condensation, RCC1
		ZFP, PHD
		ZFP, GATA type
		Unknown protein
		ZFP, GATA type
		<u>Homeobox TF</u>
		LRR transmembrane protein

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Unknown protein
		<u>Lysophospholipase-like protein</u>
		-
Y14558		<u>Topoisomerase I, beta</u>
		<u>Subtilisin-like protein</u>
		At diphthine synthase, putative
Y14558		<u>Topoisomerase I, beta</u>
		Protease inhibitor I4, serpin
		<u>Topoisomerase I, beta</u>
		<u>Peptidase, subtilase</u>
		<u>Peptidase, subtilase</u>
		Protein of unknown function DUF677
		Proteasome component region PCI
		H+ transporting ATPase
		<u>Pseudouridine synthase RluD</u>
		tRNA synthetase, class II, Prolyl-tRNA
		<u>2OG-Fe(II) oxygenase</u>
		<u>AAA ATPase</u>
		Peptidase S8 and S53, subtilisin
		Seringolide-induced protein 14-1-1
		SAM sterol C MT
		<u>Phospholipase D, beta 1</u>
X16082	---	Plastocyanin
		Ornithine decarboxylase
		Cyclin like F box, Grr1 protein
		<u>Phospholipase D</u>
		<u>Phospholipase D</u>
		Pathogenesis-related transcriptional factor and ERF
		<u>IDS-4-like protein, putative</u>
		<u>Helicase</u>
		Protein of unknown function DUF250
		Expansin 45, endoglucanase-like
		<u>Adenine nucleotide translocator 1 (brittle 1)</u>
		<u>Cellulose synthase: ZFP</u>
		<u>Calcium-binding EF-hand; Homeodomain-related</u>
		ZFP, TTF-type
		ZFP, RanBP2-type
		Phospholipase/Carboxylesterase
		<u>Peptidyl-prolyl cis-trans isomerase, cyclophilin type</u>
		Agenet, RNA binding
		<u>GTP binding nuclear protein Ran2</u>
		Ras small GTPase, Rab type
		<u>Cyclic nucleotide-binding; ion transport protein</u>
		<u>HCO3-transporter, boron transporter</u>
		<u>Deoxyxylulose-5-phosphate synthase</u>
		WD-40 repeat; quinonprotein
		<u>SWIRM; amine oxidase; NAD-</u>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<u>binding site</u>
		PK LRR
		Protein of unknown function DUF726
		ZFP, CONSTANS-type
		Forkhead-associated; SMAD/FHA
		Transcription factor, MADS-box
		AUX/IAA protein
		H+-transporting two-sector ATPase, B/B subunit
		Phox-like
		Plant lipid transfer/trypsin-alpha amylase inhibitor
		<u>TRAF-like MATH</u>
		Exostosin-like
		C2 calcium/lipid-binding region,
		Proteinase inhibitor I3
		Proteinase inhibitor I3
		CysteinyI-tRNA synthetase, class Ia
		Nodulin-like
		Nodulin
		Knotted-like KNAT3; KNOX1; KNOX2
		DNA-binding region
		Response regulator 12 (ARR12)
		Chromosome remodeling factor, TF
		<u>Chaperonin clpA/B AAA ATPase, central region</u>
		ZFP SWIM-type
		Stromal cell derived factor
		Chromogranin/secretogranin
		von Willebrand factor, type A, Tudor
		TAF5-like RNA polymerase
		WD40 associated region in TFIID subunit
		DNA-binding WRKY
		WRKY
		<u>Nuclear RNA polymerase IV beta subunit</u>
		Nonaspanin, transporter
		Copper ion binding domain
		Proton gradient regulation 3/PRR
		U6 small nuclear RNA
		Protein phosphatase 2C-like
		Cytochrome b5
AJ000520		Rieske [2Fe-2S] protein Tic55
		<u>Lariat debranching enzyme</u>
		Peroxidase
		ABC1 family protein
		Protein phosphatase 2C
AY830922		Constans-like b (COLb)
		<u>Glutamate receptor, ligand channel prot</u>
		Cytokinin independent 2
		Hydroxyproline rich glycoprotein
EU041722		<u>FIDDLEHEAD (beta keto acyl CoA synth)</u>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b><u>3-beta OH-steroid DH</u></b>
		<b><u>Translation initiation factor eIF-3b</u></b>
U4 snRNA		U4 snRNA
		<b><u>Dicer-like 3, PAZ</u></b>
		<b>PPR, selenium binding</b>
		Organic cation transport protein
		<b>PK</b>
<b>AF533439</b>		<b>G protein alpha II subunit</b>
		Gluconase
		<b>Myosin-like protein</b>
		<b>cp Cu-translocating HMA8</b>
		<b>Protein of unknown function YGGT</b>
		Cyclin-like F-box
		<b>MscS Mechanosensitive ion channel</b>
		Spermine synthase
		<b>Mechanosensitive ion channel</b>
		<b>Proteinase inhibitor I9, subtilisin propeptide</b>
		<b>Mechanosensitive ion channel</b>
		PK
		<b>Mitochondrial substrate carrier</b>
		<b>Heat shock protein Hsp20</b>
LAP2?		<b><u>Peptidase M1, membrane alanine aminopeptidase</u></b>
		<b><u>Protein phosphatase 2C-like</u></b>
		PK
		<b>PK</b>
		<b>Mitochondrial substrate carrier</b>
		<b>IQ calmodulin-binding region</b>
		<b>E-class P450, group I</b>
<b>HSFA</b>	<b>25</b>	<b>Heat shock factor (HSF)-type</b>
		<b>Glutaredoxin-like, plant II</b>
		<b>Mitochondrial substrate carrier</b>
		<b>Peptidase M41</b>
<b>Fts4 AJ635223</b>		<b>FtsH-like protease</b>
		Zn and Cd transporter
		<b>Myb-like DNA-binding region, SHAQKYF class</b>
		<b>ZFP, SWIM-type</b>
		<b>NADH ubiquinone oxidoreductase, 20 kDa subunit</b>
		<b>Ferrochelatase</b>
		<b>LRR</b>
		<b>Endopeptidase, legumain-like</b>
		<b>Helix-loop-helix DNA-binding</b>
		<b>ruv DNA helicase</b>
		S-locus like receptor
		D mannose binding lectin family protein
		L-asparaginase
		Cyclin d3
		<b>Peptidase C1A, papain</b>
		<b>Receptor kinase like protein</b>
		<b><u>Kinesin-like protein</u></b>
		<b>Heat shock protein, TTP repeat</b>
		<b><u>SPIa/Ryanodine receptor SPRY</u></b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>Pathogenesis-related TF</b>
		<b>Polyadenylate binding protein</b>
		Polyadenylate-binding protein
		<b>Transferase</b>
		Transferase
		Transferase
		<b>Heat shock TF 5</b>
		Protein of unknown function, DUF889
		<b>Basic helix-loop-helix protein</b>
		Cold-induced protein
		Abscissic acid responsive elements binding factor 2
		Electron transporter thiol-disulfide
		PPR, putative
		DEM-like protein
		light harvesting complex
		Chlorophyll a/b binding protein
		Protein of unknown function DUF827
		Laccase
		<b>Laccase (diphenol oxidase)</b>
<b>Tic22 (AF095284)</b>	---	<b><u>Tic22 (cp-specific protein)</u></b>
		<b>Lipin family protein</b>
		Dihydroflavonol-4-reductase, putative
		Isocitrate dehydrogenase (NAD)
		<b><u>Patatin-like protein</u></b>
		<b>ABCF DNA binding protein</b>
		Myb, DNA-binding
		<b>EMB1427; tubulin binding</b>
		<b>PK MAPKKK</b>
		<b><u>Proteinase inhibitor I4, serpin</u></b>
		<b><u>Proteinase inhibitor I4, serpin</u></b>
		Proteinase inhibitor I4, serpin
		Proteinase inhibitor I4, serpin
		Proteinase inhibitor I4, serpin
		<b><u>Histone acetyltransferase ZFP</u></b>
		<b>Cyclin-like F-box</b>
		<b>Proteinase inhibitor I4, serpin</b>
		<b>Proteinase inhibitor I4, serpin</b>
		Proteinase inhibitor I4, serpin
		<b>Protein of unknown function DUF889</b>
		Nitrate transporter, putative
		Peptidase S24, S26A and S26B
		<b>LRR, Pistil-specific extensin-like protein</b>
		<b><u>Prolyl-tRNA synthetase, class IIa</u></b>
		<b>F-box with TIR</b>
		<b>Short-chain dehydrogenase/reductase</b>
		<b>PK</b>
		<b>TF B3; Cupredoxin</b>
		No apical meristem protein
		ZFP, Tim10/DDP-type
		<b>ZFP, DHHC-type</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Helix-turn-helix, Fis-type, related
		<b>MtN3 and saliva related transmembrane protein</b>
		<b><u>Pseudouridine synthase</u></b>
		Decrease in DNA methylation, acylphosphatase
		<b>Acyltransfer-like protein</b>
		Homeodomain-like SWIRM
		<b>Metal ion binding</b>
		<b>Phosphoesterase</b>
		Nodulin-related
		Heat shock protein binding
		<b>TF HAP5A-like</b>
		<b>Acetolactate synthase (cp precursor)</b>
		<b>ZFP, MYND-type</b>
U15036 (NIP)	16	<b>14-3-3 protein</b>
		<b><u>serine-tRNA synthetase family</u></b>
DQ092413		Isoamylase
		<b>Ripening responsive protein</b>
		<b><u>Unknown protein, RF2 protein</u></b>
		<b>Sabre, maize apt1, root cortex protein</b>
		<b><u>SNF1-related kinase</u></b>
		<b>PK</b>
		<b>Serine protease, serpin</b>
		<b><u>ABC type transport protein</u></b>
		Protease inhibitor
		Protease inhibitor I4
		<b><u>Unknown protein, At binding</u></b>
		<b>PK</b>
		<b><u>rab geranylgeranyl transferase, putative</u></b>
		<b>At hyponastic lvs 1</b>
Win?		<b>AtCER2 (cuticular wax biosynthesis), transferase</b>
		<b><u>NADPH cytochrome P450 reductase</u></b>
		<b>Myb-type TF</b>
		Cell surface glycoprotein
		Kinase interacting protein 1
		<b><u>Arginosuccinate lyase</u></b>
		<b>Kinesin-like protein</b>
PS RT17-1		<b><u>HLH TF, auxin growth promoter, evergrowing</u></b>
		<b><u>AtMSL (MSC-like)</u></b>
		DNAJ heat shock sequence
		<b>Upl1 protease</b>
		<b>Serine carboxypeptidase</b>
		AT-hook motif DNA binding protein
		Ubiquitin-specific protease
		cp nucleoid DNA binding protein-related
		Serpin, putative serine protease
		<b>Mitochondrial dicarboxylate carrier</b>
		<b>Pleckstrin domain containing protein</b>
		PPR-repeat containing protein

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>14-3-3 protein (AtGRF8)</b>
		<b>TF, embryo arrest</b>
		<b>PK</b>
		<b><u>WD-40 transducin</u></b>
		<b>Cyclin dependent protein kinase delta 2</b>
		<b><u>AtFIP1</u></b> (FH interacting protein)
		<b>ABC transporter 1-like</b>
		<b>HYS1, related</b>
		<b><u>ZFP; SPLa/Ryanodine receptor</u></b>
		<b><u>Glycoside hydrolase, family 77</u></b>
		<b>Cyclin-like F-box</b>
		<b>Ribosomal protein L6E</b>
		Aldehyde DH family, putative
		<b><u>ABC transporter 1-like</u></b>
		<b>DNA-binding WRKY</b>
		<b>Glycoside hydrolase, family 17</b>
		<b>TPR repeat</b>
		<b>DNA-binding WRKY</b>
Lka	16	<b>Leucine-rich repeat, typical subtype</b>
		<b>Protein of unknown function DUF250</b>
		<b>Terpenoid synthases/protein prenyltransferase</b>
		<b>DNA binding, AP2 homolog</b>
		RNA-binding region RNP-1
		Alba, cp DNA binding
		<b>Protein of unknown function DUF1278</b>
		<b>24 kDa protein SC24</b>
		<b>TF IIS</b>
		<b>Protein of unknown function DUF537</b>
		<b>Protein of unknown function DUF6</b>
		<b><u>Protein of unknown function DUF6,</u></b>
		Protein of unknown function DUF6, transmembrane
		Heat shock protein DnaJ, N-terminal
		Carbamoyl-phosphate synthase, GATase region
Sac3		<b>Actin/RING-like</b>
		<b>ZFP, RING-type</b>
		Cyclin-like F-box
		<b>PK</b>
		Cyclin-like F-box
		<b><u>N-terminal protein myristoylation</u></b>
		Protein of unknown function DUF167
		<b>PK</b>
		<b>U box</b>
		Protein phosphatase 2A
		<b><u>Cytochrome oxidase</u></b>
		<b>Ribosomal protein S2</b>
		<b>ZFP, FYVE/PHD-type</b>
		<b><u>Protein of unknown function DUF239</u></b>
		Ribosomal protein L17

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		GT, family 8
		Pectin methylesterase-like
		Auxin-independent growth promoter
		Flavin containing oxidoreductase, class-II
		<u>O-MT</u>
		<u>O-MT</u>
		<u>Phosphatidylinositol 3- and 4-kinase, catalytic</u>
		Acetylglucosamidyltransferase
		PRL1 interacting factor G
		<u>1,3-beta glucan synthase</u>
		<u>MAKKK (alpha)</u>
		DNA ligase like
		Cyclin-like F box
		ABC transporter related
		Polygalacturonase, putative
		U box
		Monovalent cation:proton antiporter
		<u>Branched chain alpha keto acid DH</u>
		ABC transporter-like
		TTP-like helical
		PPR-repeat-containing protein
		Protein of unknown function DUF248,
		<u>Gibberellin 20-oxidase</u>
		DNA polymerase delta catalytic subunit, putative
		DNA polymerase B, exonuclease
		<u>PK</u>
AB044940		12-oxy-phytodienoic acid 10,11 reductase
		<u>DNA topoisomerase I, ATP-binding</u>
		Silent information regulator protein Sir2
		<u>Amino acid/polyamine transporter</u>
		Regulator of chromosome condensation/beta-lactamase-inhibitor protein II
		Heat shock protein DnaJ, N-terminal
AAX56952		<u>Amino acid transporter II</u>
AAX56952		<u>Amino acid/polyamine transporter</u>
		<u>Glycoside hydrolase, family 31</u>
		Beta-galactosidase
Gal3?	35?	Beta-galactosidase
		No apical meristem protein
		<u>Nucellin like protein, peptidase</u>
		Protein of unknown function DUF630
		Amidase
		Protein of unknown function DUF869
		Octicosapeptide/Phox/Bem1p
		Phenylacetic acid degradation-related protein
		<u>Ca-dependent PK</u>
		<u>Ca-dependent PK</u>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Cleft lip and palate transmembrane 1
		PTP repeat
		Suppressor of gene silencing 3
		Suppressor of gene silencing 3
		Pentatricopeptide repeat
		Frigida-like
		<u>ATP-dependent clpA/B protease</u>
		<u>Respiratory burst oxidase 1</u>
		<u>Respiratory burst oxidase 1 (NADPH oxidase)</u>
BAC06184	---	<u>110 kd Tudor domain protein (RNA binding)</u>
PSA17329	---	Calnexin precursor
		Calcium-binding; Adenine nucleotide translocator
		Short-chain dehydrogenase/reductase
		Protein of unknown function DUF339
		Phosphoinositide binding protein
Uni (AF010190)	36	<u>Floricaula/leafy protein, FLO</u>
		AP2 domainTF
		WD40-like
		<u>Glycoside hydrolase family 28</u>
		Exostosin-like
AM161934	---	<u>Selenium binding protein</u>
		pentatricopeptide repeat
		<u>adenosylhomocysteinase (ACH1)</u>
		<u>Aspartate kinase homoserine DH like protein</u>
		<u>PK LRR</u>
		UDP-glucose:anthocyanin 5 O glucosyltransferase
		UDP-glucose:anthocyanin 5 O glucosyltransferase
		UDP-glucose:anthocyanin 5 O glucosyltransferase
		ZFP, C2H2-type
		SNF2-domain containing protein
		<u>Xyloglucan endotransglycosylase, putative</u>
		<u>Xyloglucan endotransglycosylase, putative</u>
		<u>Protein binding/transporter</u>
		ZFP, C2H2-type
		Kinesin, motor region; Kinesin-related
		<u>DNA topoisomerase I</u>
AJ621573	---	Phytoene desaturase
		tospovirus res pro C
SEP3	38	<u>SEP3 MADS box</u>
		<u>PAKRP1 (phragmoplast assoc. protein)</u>
		<u>Phosphoribosylformylglycinamide synthase</u>
		Nuclear transport factor 2
		Histidine kinase A

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		ZFP
		Plant lipid transfer/trypsin-alpha amylase inhibitor
		<b>Centromere protein B, DNA-binding region</b>
		Alkylated DNA repair protein
		<b>2OG-Fe(II) oxygenase</b>
		<b>ZFP, MYND-type Cyclin-like F-box DNA-binding HORMA</b>
		Mitochondrial import receptor subunit TOM20-2
		<b>Microtubule-associated protein</b>
		<b><u>Engulfment and cell motility, ELM</u></b>
		<b>Exostosin-like</b>
		<b>Ribosomal protein L22/L17</b>
		<b>AAA ATPase</b>
		<b>GTPase EngC</b>
		<b>Kelch repeat containing F box</b>
		<b>Ubiquitin protein ligase</b>
		<b>Ankyrin</b>
		<b><u>Urease, gamma/beta/alpha type</u></b>
		<b>PK, cell division cycle 2-like family</b>
		<b><u>Monooxygenase, FAD-binding</u></b>
		<b>Enoyl-CoA hydratase/isomerase</b>
		<b>Histidine amino acid transporter</b>
		Ankyrin repeat like protein
PSY14559		<b><u>DNA topoisomerase II</u></b>
		Cyclin like Fbox
		Cell cycle checkpoint protein MAD2
		Protein of unknown function, DUF889
		<b>Protein phosphatase 2A, regulatory B subunit, B56</b>
		<b>Transferase</b>
		Heat shock protein Hsp20
		<b>Disease resistance protein</b>
		<b>Response regulator, RegA/PrrA/ActR type</b>
		<b>Receptor kinase, putative</b>
		ZFP, RING-type
		<b>Prefoldin; t-snare</b>
		<b>Short-chain dehydrogenase/reductase</b>
		<b><u>Short-chain dehydrogenase/reductase</u></b>
		Photosystem II core complex
		<b>60 kDa inner membrane insertion protein</b>
X80007		<b>Naringen-chalcone synthase</b>
		<b>Pectate lyase</b>
		<b>Chaperonin Cpn60/TCP-1 epsilon subunit</b>
		<b><u>Oxysterol binding protein</u></b>
		<b>Cyclic peptide transporter</b>
		<b>O-glycosyl hydrolase, putative</b>
Aatc	39	
		<b>PK</b>
		<b>MAP kinase phosphatase and dual specificity protein</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Auxin independent growth protein
		<b><u>Glycoside hydrolase, clan GH-D</u></b>
		Quinolate synthase A-like
		<b>Protein of unknown function DUF707</b>
		<b>Phosphoinositide-binding clathrin adaptor</b>
		ZFP, RING-type:
		ZFP, RING-type
		<b><u>Glycoside hydrolase, family 5</u></b>
		<b>ZFP, C6HC-type</b>
		<b><u>LMBR1-like conserved region</u></b>
		<b>Lipase, class 3</b>
		<b>PK</b>
		<b>Nucleolar antigen-like</b>
		<b>Ras GTPase</b>
		Heat shock protein DnaJ, N-terminal
		<b>Receptor-like kinase</b>
		<b>ZFP, transparent testa 1-like</b>
		<b>Ubiquitin specific protease</b>
		Ribosomal L23 and L15e
		<b><u>Asparagine synthase (partial)</u></b>
		Cyclin-like F-box FBD
		<b>C2 calcium/lipid-binding region, CaLB (triplicated)</b>
		Cyclin-like F-box
		<b><u>Peroxisomal ABC transporter</u></b>
		<b>TPR repeat</b>
		Lipoxygenase, LH2
		Lipoxygenase, LH2
		<b>Ethylene insensitive 3</b>
		<b><u>Myo-inositol-1-phosphate synthase</u></b>
		<b>Transferase</b>
		<b>Peptidase S8 and S53</b>
		<b>Sulfate transporter</b>
		<b>Peptidase A1, pepsin</b>
		<b>C2 calcium/lipid-binding protein, CaLB</b>
		<b>RNA binding protein, RNP-1</b>
		Short-chain dehydrogenase/reductase
		Short-chain dehydrogenase/reductase
		ZFP, RING-type
		<b>TGA basic leucine zipper</b>
		<b><u>Gamma glutamyl transferase</u></b>
		<b><u>Long chain acyl CoA synthase</u></b>
		<b>Photosystem II 22kd protein precursor</b>
MNSOD	40	
AB087852		Dof7 Zn finger
		<b>6-phosphogluconolactonase</b>
		<b>GT, family 8</b>
		LRR
		<b>PK LRR</b>
		PK
		<b>Small heat shock protein</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>ABC transporter</b>
		RNA-binding region RNP-1 (RNA recognition motif)
		<b>RNA-binding, Ser/Arg-rich pro 34A</b>
		<b>Auxin-independent growth promoter</b>
		<b>MscN4 putative nodule membrane protein</b>
		<b>Ribosomal protein S30EA</b>
PRR59	44	<b>Pseudo response regulator 59; CCT</b>
		Harpin-induced 1
		Transparent testa, Glabra 1 protein
		WD-40 TF
		<b>2OG-Fe(II) oxygenase</b>
		<b>Caffeic acid O-methyltransferase, family 2</b>
NPAC	44	<b>Nascent polypeptide-associated complex NAC</b>
		Nascent polypeptide-associated complex NAC; UBA-like
		<b>Haem peroxidase</b>
		<b>General substrate transporter</b>
		<b>Peptidase M20</b>
		<b>No apical meristem protein</b>
		<b>General substrate transporter</b>
		<b>Calcium-binding EF-hand</b>
		<b>Terpenoid synthases/protein prenyltransferase</b>
		<b>Ribosomal protein L9</b>
		<b>Heat shock protein Hsp20</b>
		<b>Terpenoid synthases</b>
		<b>Protein of unknown function DUF895 (duplicated)</b>
		<b>RNA binding-like protein</b>
		<b>Prefoldin</b>
		<b>Phosphatase associated protein 46 kd</b>
		<b>ZFP, RING-type</b>
		<b>Glycogen/starch synthases, ADP-glucose type</b>
		<b>ClpX, ATPase regulatory subunit</b>
		<b>Ubiquitin ligase, SINA</b>
		<b>TTP-like helical</b>
		<b>TTP-like helical</b>
		<b>Esterase/lipase/thioesterase</b>
		<b>Phosphatidylinositol 3- and 4-kinase</b>
		<b>Pectinesterase; Pectinesterase inhibitor</b>
		Peptidase S26A, signal peptidase I
		<b>2OG-Fe(II) oxygenase</b>
		<b>Glycoside hydrolase, family 1</b>
		<b>Histone-lysine N-Me transferase</b>
		<b>ZFP, SWIM-type</b>
		<b>Protease inhibitor I4</b>
		<b>Cellulose synthase-like 3</b>
		<b>ZFP, U1-type</b>
		Ubiquitin ligase, Zinc ion binding
		<b>Phosphomevalonate kinase Erg8</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>2-oxo-acyl synthase-like protein</b>
		Spermine synthase
		<b>Ion transport protein; Cyclic nucleotide-binding</b>
		Protein phosphatase 2C-like
		Heat shock protein DnaJ, N-terminal
		MtN3-like
		<b>Sigma-70 factor</b>
		DNA-binding WRKY
		Basic HLH family protein
Adh1	51	
		<b>Glycoside hydrolase, family 9</b>
		Glycolipid transfer protein
		Chaperonin, AP2 TF, and endomembrane protein 70 sequences
		<b>Electron carrier/oxidoreductase</b>
		<b>PK LRR</b>
		<b>Delta-aminolevulinic acid dehydratase</b>
		<b>Peptidase M20</b>
		BTB/POZ TRAF-like
		<b>Galactose-binding like</b>
		8-oxoguanine DNA-glycosylase
		ZFP, CCHC-type
		<b>SWIRM domain-containing protein</b>
		<b>Root-specific metal transporter</b>
		Photosynthetic reaction center protein
		<b>Root-specific metal transporter</b>
		<b>Transferase</b>
		Ankyrin
		Embryo defective putative replication factor
		Calcium-binding pollen allergen
		ZFP, RING-type
		<b>Acetyl-CoA synthetase, putative; Rhodopsin-like GPCR superfamily</b>
		Elongation factor P/YeiP
		<b>Myb containing protein</b>
		<b>RNA-binding region RNP-1</b>
		<b>Calmodulin binding, putative</b>
		<b>Beta 1,3-glucanase</b>
		<b>Peptidase C19, ubiquitin carboxyl-terminal hydrolase 2</b>
		<b>O-MT, family 2; Dimerisation</b>
		<b>Ribosomal protein S2; Squalene/phytoene synthase</b>
		Cyclin-like F-box
		Cyclin-like F-box
		PTP repeat
		<b>ATP-dependent RNA (DEAD/DEAH box) helicase</b>
		Lipid binding xylogen like protein 10
		<b>Phytase; Purple acid phosphatase</b>
		<b>Metallophosphoesterase; Purple acid phosphatase, N-terminal</b>



Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Sodium/hydrogen exchanger
		TAFII55 protein conserved region
		Naringenin-Chalcone synthase
X80007 CHS2		Naringenin-Chalcone synthase
		Protein of unknown function DUF803
		<u>Down-regulated in metastasis</u>
		Aminotransferase, cysteine desulfurase
		Rhodanese-like
		RNA-binding region RNP-1
		Protein of unknown function DUF889
		NAD-dependent sugar epimerase;
		<u>Carbohydrate transporter</u>
		Ubiquitin-like protein
		<u>Auxin responsive SAUR protein</u>
		<u>Auxin responsive SAUR protein</u>
		<u>Adenosylhomocysteinase (ACH2)</u>
		<u>Subtilisin like peptidase</u>
		Heavy metal transport/detoxification protein
		Heavy metal transport/detoxification protein
		<u>Steroid nuclear receptor, ligand-binding</u>
		Peptidase C1A, papain
		NADH dehydrogenase subunit 4
		<u>O-glycosyl hydrolase</u>
		RNA binding protein, RNP-1
		ZFP, RING-type
		<u>Zinc ion binding transcription factor</u>
		<u>RNA-binding region</u>
		<u>AMP-dependent synthetase and ligase</u>
		<u>Rubisco MT</u>
		<u>Inorganic phosphate transporter</u>
		<u>Ribosomal protein L13, organelle form</u>
		ZFP, ZZ-type
		<u>G-D-S-L lipolytic enzyme</u>
		Protein of unknown function DUF1664
		<u>BTB/POZ; Ankyrin</u>
Acp3	54	
		<u>Beta-D-glucan exohydrolase, putative</u>
		TIR-NBS-LRR disease resistance protein, AtRPP5
		TIR-NBS-LRR disease resistance protein
		Zinc knuckle family protein
		<u>Ubiquitin-specific protease</u>
		<u>Ubiquitin-specific protease</u>
		PTP repeat protein
		ATP-dependent DNA helicase, putative
		PTP repeat
		<u>Haem peroxidase</u>
		<u>ATP-dependent DNA helicase, putative</u>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		ATP-dependent helicase
		Lyk3 gene for LysM receptor kinase (partial?)
		Ser/Thr protein phosphatase
		Cation diffusion facilitator
		Leucine zipper, homeobox-associated
		Transmembrane coiled-coil
		Helicase-like
		<u>Receptor-like kinase LysM domain</u>
		<u>1,3-beta gluconase, putative</u>
		<u>MDR like ABC transporter</u>
		PTP repeat containing protein, putative
		<u>Sugar transporter like protein</u>
		N7 protein like
		N7 protein like
		Cyclin-like F-box
		N7 like protein, Cyclin-like F-box, putative nodulin
		<u>N7 like protein, putative nodulin</u>
		<u>Cyclin-like F-box</u>
		Xanthine/uracil/vitamin C permease
		<u>Beta 1,3 gluconase-like</u>
		<u>Nematode resistance like protein, LRR</u>
		<u>Disease resistance protein TIR; LRR</u>
		<u>Phosphoinositide-binding clathrin adaptor</u>
		<u>Copper amine oxidase</u>
		Thioredoxin-related
		<u>Cytochrome P450-like protein</u>
		ZFP, HAT dimerization
		<u>Aspartyl aminopeptidase-like</u>
		<u>4-coumate CoA ligase</u>
		<u>4-coumate CoA ligase</u>
		<u>PK LRR</u>
		<u>Argininosuccinate synthase duplicated</u>
		Cycloeucaenol cycloisomerase , putative
		<u>RNA-metabolising metallo-beta-lactamase</u>
		<u>20S proteasome, A and B subunits</u>
		Calcium-binding EF-hand
		Calcium-binding EF-hand
		Forkhead associated
		<u>Pyruvate dehydrogenase E1 beta subunit</u>
		S-2-OH acid oxidase (peroxisomal)
		<u>WNK kinase 3</u>
		<u>Translation elongation factor A (TufA)</u>
		Argonaute-like sequence
		Asymmetric lvs (As2)-like sequence
		<u>Anthranilate synthase component I</u>
		Trehalose 6-P synthetase, putative

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		PK
		<b><u>LRR</u></b>
		<b><u>Calcium/lipid-binding region, CaLB C2</u></b>
		Octicosapeptide/Phox/Bem1p, cercropin
		IAA-amino acid hydrolase related
		<b>Ribosomal protein L27A</b>
		<b><u>Copper amine oxidase</u></b>
		<b>Histone deacetylase superfamily</b>
		PTP repeat
		<b>Protein of unknown function DUF260</b>
PSA426475		<b><u>Raffinose synthase</u></b>
		<b><u>D111/G-patch</u></b>
		Chaperonin Cpn10; GroES-like
		<b><u>Short-chain dehydrogenase</u></b>
		<b><u>TF jumonji, jmjC</u></b>
		<b>Protein of unknown function DUF239</b>
		Cytochrome P450-like
		Phosphoribosyl anthranilate transferase
		<b>Phox-domaining containing protein</b>
		Protein of unknown function DUF250
		Myb, DNA-binding
		<b><u>Boron transporter</u></b>
		<b>Centromere protein B, DNA-binding region</b>
		FeS cluster assembly scaffold
		Nitrogen-fixing NifU-like, N-terminal
		<b><u>Pantothenate kinase</u></b>
		<b>ZFP, Dof-type</b>
		<b>Serine/threonine-PK ATM , putative ATM protein</b>
		NAD+ ADP-ribosyltransferase
		<b><u>Carbonic anhydrase</u></b>
		<b><u>Carbonic anhydrase</u></b>
		Protein of unknown function DUF1645
		<b><u>ATM protein</u></b>
		HMG-I and HMG-Y, DNA-binding
		E-class P450, group I
		Cytochrome P450-like
		ATP-binding region, ATPase-like
		<b><u>Phox-like</u></b>
		Protein of unknown function DUF6
		Myb-like protein
		<b><u>Boron transporter</u></b>
		<b>CENP-B protein; Homeodomain-like</b>
		Nitrogen-fixing NifU-like, N-terminal
		FeS cluster assembly scaffold IscU
		<b><u>Pantothenate kinase</u></b>
		Protein of unknown function DUF6, transmembrane
		Putative protein
		emp24 protein

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		TF, TINY-like protein
		<b>25.7 kd protein</b>
		<b>ZFP, RING-type</b>
		<b>Phosphatidylinositol-4-phosphate-5-kinase</b>
		TF b2
		<b>Aminotransferase</b>
		<b>Aminotransferase</b>
		<b>Aminotransferase</b>
		<b>GRAS TF</b>
		<b>Curculin-like (mannose-binding) lectin</b>
		<b>Flavonol synthase</b>
		<b>Flavonol synthase</b>
		<b>Camphor resistance CrcB protein</b>
		Camphor resistance CrcB protein
		<b><u>Auxin influx carrier protein</u></b>
		PTP repeat
		ZFP, C2H2-type
		Fatty acid condensing enzyme, putative
		<b>PK</b>
		<b><u>Oxysterol binding protein, putative</u></b>
		Unknown protein
		NFU domain protein
		<b>Chromosomal remodeling protein 42</b>
		<b>Sodium/hydrogen exchanger</b>
		<b>Sodium/hydrogen exchanger</b>
		<b><u>Multicopper oxidase</u></b>
		<b><u>Trimeric lipoxigenaseA-like</u></b>
		Prephenate DH
		<b>Sodium/hydrogen exchanger</b>
		Heavy metal transport/detoxification protein
		Wound-induced WI12
		<b>Wound-induced WI12</b>
		<b>Cip uroporphyrinogen decarboxylase</b>
		<b>Serine/threonine PK, related</b>
		<b><u>TGF-beta receptor, type I/II extracellular region</u></b>
		Haem peroxidase
		<b>Haem peroxidase</b>
		Hypoxia induced protein conserved region
		<b>NBS-LRR</b>
		<b>Translation elongation factor, GTP-binding</b>
		<b>Translation elongation factor, GTP-binding</b>
		<b>Amino acid/polyamine transporter II</b>
		Amino acid/polyamine transporter II
		TTP-like helical
		<b><u>TGF-beta receptor, type I/II extracellular region</u></b>
		<b>Serine/threonine PK</b>
		Uroporphyrinogen decarboxylase, partial

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Golgi nucleotide sugar transporter
		Nucleotide triphosphatase
		Peptidase S1 and S6; Peptidoglycan-binding LysM
		TF b4
		N7-like protein, nodulin
		Linker histone, N-terminal
		<b>Agenet</b>
		Nodulin
		Hin19-related, RNA binding
		<b>Glycoside hydrolase, family 17</b>
		<b>Myb, DNA-binding</b>
		<b>ZFP, C6HC-type</b>
		<b>ZFP, C6HC-type</b>
		<b>Protein of unknown function DUF26</b>
		<b>Chromosome condensation protein-like</b>
<b>Gsn</b> (pGS341)	58	<b>Glutamine synthetase (nodule specific)</b>
		RNA-binding region
		Splicing factor 3B-like
		<b>Peptidase A1, pepsin</b>
		<b>mt NADH dehydrogenase</b>
		ATPase, DEAD/DEAH box helicase
		<b>MADS-boxTF AGL45</b>
		<b>Fungal elicitor protein</b>
		ZFP, C2H2-type
		<b>HEAT repeat-like protein</b>
		<b>NMD3</b>
		<b>Protein of unknown function DUF635</b>
		<b>Myb-like DNA-binding region, SHAQKYF class</b>
		Cytochrome c oxidase assembly protein
		C2 calcium/lipid-binding region, CaLB
		<b>Glutamate decarboxylase</b>
		<b>Glutathione S-transferase, partial</b>
		<b>Protein of unknown function DUF889</b>
		<b>Sucrose synthase</b>
		<b>Regulator of chromosome condensation; ZFP</b>
		<b>Expansin 45</b>
		<b>Myb TF</b>
		UDP--glucose-pyrophosphorylase, partial
		<b>Global transcription factor group C 102</b>
		<b>AMP-dependent synthetase and ligase family</b>
		<b>Lysine-specific histone demethylase</b>
		2Fe-2S ferredoxin, iron-sulfur binding site-5prime partial
		<b>Polyamine oxidase</b>
		<b>Polyamine oxidase</b>
		Arginyl tRNA synthetase (partial?)
		Integral membrane family protein

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>SWIB complex</b>
		<b>SWIB complex</b>
		ZFP-like
		<b>SWIB complex</b>
		<b>SWIB complex</b>
		Ca-dependent PK-like
		<b>tRNA-splicing endonuclease</b>
		Proteinase inhibitor I4, serpin
		Helicase SEN1, related
		<b>Beta-catenin-like protein 1 , related</b>
		<b>Hydrolase</b>
		<b>Serine/tyrosine PK</b>
		<b>Receptor kinase-like</b>
		<b>Auxin response factor TF b3</b>
		Protein of unknown function DUF231, plant
		<b>ATP-dependent helicase, DEAD-box</b>
		<b>Glycoside hydrolase, family 85</b>
		NADH plastoquinone oxidoreductase
		<b>Histidine acid phosphatase</b>
		<b>Eukaryotic translation initiation factor 2, alpha</b>
		<b>Eukaryotic translation initiation factor 2, alpha</b>
		Eukaryotic translation initiation factor 2, alpha subunit
		Protein of unknown function DUF248
		<b>Glutaredoxin</b>
		<b>Serine/threonine PK</b>
		<b>PK, putative</b>
		<b>Outer membrane protein</b>
		Lateral organ boundaries-like 1
		<b>Transferase family</b>
		ZFP, RING-type
		Disease resistance protein- Rps-1-k-2
		<b>major histocompatibility complex</b>
		Peptidase aspartic, active site
		Basic helix-loop-helix dimerisation region
		<b>Clathrin propeller, N-terminal</b>
		<b>Ribosomal protein L1</b>
Histone 4		<b>Histone H4</b>
		N-(5 phosphoribosyl) anthranilate isomerase
		<b>2OG-Fe(II) oxygenase</b>
		<b>Serine/threonine PK</b>
		<b>Electron transporter transcription factor</b>
PSPLC		<b>Phospholipase C</b>
		<b>Phosphatidylinositol-specific phospholipase C</b>
		Protease inhibitor I25
		<b>Phosphatidylinositol-specific phospholipase C</b>
		ZFP, SWIM-type FAR1
		Peptidyl-prolyl cis-trans isomerase, cyclophilin

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		GINS complex, Psf3 component
		PK-like
		Arginyl tRNA protein transferase
		Chlorophyll a/b binding protein, putative
		<b>Cytochrome P450 family</b>
		<b>Nuclear pore protein related protein</b>
		ABC-1 protein, putative
		GINS complex, Psf3 component
		Early flowering 4-like
		<b>Cyclophilin</b>
		<b><u>Anthranilate synthase alpha subunit I</u></b>
		Protein of unknown function DUF889
Hs1pro-1		<b>Nematode resistance homolog</b>
		<b>Receptor kinase-like protein</b>
Trg-31		<b>Aquaporin PIP type 7a</b>
		<b>26S proteasome subunit</b>
		<b>Transferase</b>
		<b>Coronatine-insensitive 1</b>
AM161697	60	<b><u>Sedoheptulose 1,7 bisphosphatase</u></b>
		Acid phosphatase (Class B)
		<b><u>No apical meristem protein</u></b>
		<b>No apical meristem protein</b>
		<b><u>Organic anion transporter, putative</u></b>
		<b>Proline transporter</b>
		Concanavalin A-like lectin/glucanase
		adenyl cyclase, partial
		G-D-S-L lipolytic enzyme
		<b>Protein of unknown function DUF620</b>
		<b>UDP-glucuronosyl/UDP-glucosyltransferase</b>
		<b>UDP-glucuronosyl/UDP-glucosyltransferase</b>
		guanylyl cyclase-like protein, putative
		G-D-S-L lipolytic enzyme
		<b>Ras small GTPase, Rab type</b>
		<b>Peptide transporter</b>
		Lim domain-containing protein
		<b><u>Peptide transporter POT family</u></b>
		TGF-beta receptor, type I/II
		Histidine triad protein
PSPLC		<b><u>Phosphatidylinositol-specific phospholipase C</u></b>
		<b>NBS-LRR</b>
		<b>2-nitropropane dioxygenase, NPD</b>
		<b>Delta I-pyrroline-5-carboxylate synthetase</b>
		GDP-mannose pyrophosphorylase
		<b>PK, putative</b>
		<b>Ankyrin protein</b>
		<b><u>AAA ATPase: 26S proteasome subunit P45</u></b>
		<b>Blue light receptor phototropin</b>
		<b>PK</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>PK; adipokinetic hormone</b>
		Ribosomal protein L10E
		<b>Cation efflux protein</b>
		Glucose transporter KH, type 1
		<b>Chromogranin/secretogranin</b>
		<b>Root phototropism 2</b>
		Nucellin
		Pepsin A
		Peptidase aspartic, catalytic
		<b><u>Neutral/alkaline nonlysosomal ceramidase</u></b>
		<b>Mitotic cyclin B1-1</b>
		<b>DNA helicase, putative</b>
		DNA helicase, related
		Heterogeneous nuclear ribonucleoprotein
		histone 4
		<b><u>transducin family, WD-40 protein</u></b>
		<b><u>Protein transport protein</u></b>
		<b><u>CAATT binding TF</u></b>
		<b>MAP kinase</b>
		<b>Mitotic cyclin B1 type</b>
		<b>Pectinesterase inhibitor</b>
		<b>Mitotic cyclin B1 type</b>
		<b>Pectinesterase inhibitor</b>
		<b>Mitotic cyclin B1 type</b>
		<b>Pectinesterase inhibitor</b>
		<b>Mitotic cyclin B1 type</b>
		<b>Pectinesterase inhibitor</b>
		<b>Mitotic cyclin B1 type</b>
		<b>Pectinesterase inhibitor</b>
		<b>Prefoldin</b>
		Phosphatidylinositol transfer protein-like, N-terminal
		<b>RNA polymerase, RpoA/D/Rpb3-type</b>
		Nucleolar NOL1
		<b>ATPase coupled with transmembrane transport</b>
		<b>ZFP, RING-type</b>
		<b>Chaperonin clpA/B</b>
		Calcineurin B-like protein, putative
		Peptidylprolyl isomerase, FKBP-type
		<b>B-type Cyclin</b>
		<b>Clavata-like PK</b>
		<b>Kinesin, motor region Calponin-like actin-binding</b>
		Protein prenyltransferase TTP-like helical
		Myb, DNA-binding; TTP-like helical
		Phosphoribulokinase/uridine kinase
		BTB/POZ; TRAF-like
		<b>Proteinase inhibitor I9</b>
		Isopenicillin N synthetase; KH, type 1
		<b>UBA-like aspartic peptidase</b>
		<b><u>Nucleotide binding protein</u></b>
		ZFP, TTF-type, HAT dimerization
		<b>1,4-alpha-glucosidase</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		TF b3
		TF b3
		TF b3
		TF b3
		Amino acid permease
		Amino acid/polyamine transporter II
		LRR
		Kinesin, motor region
		C2 calcium/lipid-binding region
		LRR, ribonuclease inhibitor type
		HTH, Fis-type, related
		RNA-binding region RNP-1
		Serine/threonine PK (duplicated)
		Frigida-like
		DNA-binding WRKY
		GRAS TF
		ZFP, CCCH-type
		Peptidase M, neutral zinc metallopeptidases
		Putative late blight resistance protein homolog
		Disease resistance protein, t-snare
		NB-ARC LRR
		Domain of unknown function DUF223
		Domain of unknown function DUF223
		Translation initiation factor
		GDP-D-mannose 3',5' epimerase
		Linolool synthase
		Syntaxin/epimorphin family
		WD-40 repeat
		gamma subunit cp ATP synthase
		Protein of unknown function DUF584
		Myb family TF
		G-D-S-L motif lipase/hydrolase family
		Unknown bromodomain protein
		<u>RNA helicase</u>
		Phosphoribosylformylglycinamide cyclo-ligase (plastid)
		Jasmonate O-MT, partial
		DEAD/DEAH box helicase, N-terminal
		Lipolytic enzyme, G-D-S-L
		Protein of unknown function DUF889
		Lipolytic enzyme, G-D-S-L (duplicated)
		Myb, DNA-binding
		Protein of unknown function DUF584
		gamma subunit cp ATP synthase
		WD-40 repeat
		Syntaxin/epimorphin family
		Ubiquitin
		UDP-glucuronosyl/UDP-glucosyltransferase

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		E-class P450, group I
		E-class P450, group I
		<b>E-class P450, group IV</b>
		<b>E-class P450, group I</b>
		<b>E-class P450, group I</b>
		<b>E-class P450, group I</b>
		<b>E-class P450, group I</b>
		<b>E-class P450, group I</b>
		<b>E-class P450, group I</b>
		<b>E-class P450, group I</b>
		<b>Ent-kaurene synthase</b>
		<b>Glutamyl-tRNA amidotransferase subunit</b>
		<b>Citrate synthase 2</b>
		LRR
		LRR
		Protein of unknown function DUF889
		Protein of unknown function DUF1278
		Unknown protein
		Unknown protein
Gpt (AF020841)	70	<b><u>Tpt phosphate/phosphoenolpyruvate translocator Tpt</u></b>
		<b><u>Tryptophan synthase (beta 2 chain)</u></b>
		Forkhead-associated
		Cyclin-like F-box
		P-type trefoil
		<b>UDP-glucuronosyl/UDP-glucosyltransferase</b>
		<b>Microtubule-associated protein</b>
		Protein of unknown function DUF889
		<b><u>DNA polymerase A family protein</u></b>
		<b><u>DNA-directed DNA polymerase</u></b>
		Protein of unknown function (duplicated)
AJ312062		ZFP, CCCH-type
		<b><u>Sister chromatid cohesion protein</u></b>
		N-acetyltransferase, related
		<b>PK</b>
		<b>Ankyrin</b>
		Ankyrin
		Ankyrin
		Beta fructosidase (partial), pollen allergen
		<b><u>Tryptophan synthase beta subunit</u></b>
		<b>Biopterin transport-related protein BT1</b>
		Prolyl 4-hydroxylase, alpha subunit
		Cytochrome P450
		<b>Purple acid phosphatase-like</b>
		Like-Sm ribonucleoprotein-related, core
		<b>Heat shock protein Hsp70</b>
		<b>Aminopetidase, acyl peptide hydrolase-like</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Phospholipid/glycerol acyltransferase
		Plant basic secretory protein
		Cyclin-like F-box
		<b>Prolyl-tRNA synthetase</b>
		<b>Proteinase inhibitor I4, serpin</b>
		<b>Cyclin-like F-box</b>
AY289132		Replication factor 70 kDa
		<b>PK</b>
		Cyclin-like F-box
		<b><u>1,3-beta glucan synthase/transferase</u></b>
		<b><u>Sucrose-phosphate synthase 2</u></b>
		Lectin, beta domain
		Triacylglycerol lipase, related
		<b>Cytochrome b561 / ferric reductase transmembrane</b>
		ZFP, CCHC-type
		<b>Sulfotransferase</b>
		Urocanase
		<b>Myb 60-like protein</b>
		ZFP CCHC-type
		Hemopexin
		<b>Exo70 exocyst complex subunit</b>
		<b>DNA-binding WRKY</b>
		<b>Cyclin-like F-box, xylose isomerase</b>
		Cyclin-like F-box
		<b><u>Polygalacturonate 4-alpha galacturonosyltransferase</u></b>
		<b><u>Mo25 family protein</u></b>
		PTP repeat containing protein
		Auxin response family protein
		<b>Phytochrome A signal transduction (AtPAT1)</b>
		<b><u>GDP-mannose pyrophosphorylase (AtCYT1)</u></b>
		<b>Glycosyl hydrolase family protein</b>
		ZFP
		<b>67 kD clp RNA binding protein (salt-inducible)</b>
		Cytochrome P450 protein, putative
		<b>Polygalacturonase, BURP-containing</b>
		<b><u>Outward rectifier potassium channel (AtKCO1)</u></b>
		<b>70 kD microtubule associated protein</b>
		AHC1 gene homolog
		<b>Proline-rich protein homolog</b>
		mt AKIN beta2
		<b>LRR</b>
		<b>RbcL</b>
		<b>LRR</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>TPR repeat</b>
		<b>Photosystem I psaA and psaB</b>
		<b>Ribosomal protein S14</b>
		hypothetical pro
		<b>Ribosomal protein S12, bacterial and chloroplast form</b>
		<b>Ribosomal protein S7, bacterial and organelle form</b>
		<b>NADH/Ubiquinone/plastoquinone (complex I)</b>
		<b>NADH/Ubiquinone/plastoquinone (complex I)</b>
		<b>Protein ycf2, putative</b>
		<b>Ribulose biphosphate carboxylase, large chain</b>
		<b>Maturase-related, N-terminal</b>
		<b>Ribosomal L23 protein</b>
		<b>Ribosomal protein L2</b>
		<b>Ribosomal protein S19/S15</b>
		<b>H<sup>+</sup>-transporting two-sector ATPase, alpha/beta subunit</b>
		<b>H<sup>+</sup>-transporting two-sector ATPase, delta/epsilon subunit</b>
		<b>NADH-ubiquinone/plastoquinone oxidoreductase, chain 3</b>
		<b>LRR</b>
		NB-ARC domain
		Lustrin A-like protein
		NB-ARC LRR
		<b>NB-ARC LRR</b>
		<b>NB-ARC LRR</b>
		<b>LRR</b>
		<b><u>FAD linked oxidase</u></b>
		Cyclin-like F-box; FBD
		Cyclin-like F-box; FBD
		LRR, cysteine-containing subtype
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		F-box domain
		Cyclin-like F-box
		<b>Seed maturation protein</b>
		<b>LRR</b>
		Organ-specific protein S2-like
		<b>NB-ARC LRR</b>
		<b>NB-ARC LRR</b>
		<b>NB-ARC LRR</b>
AJ251969		<b><u>Peptidase S10, serine carboxypeptidase</u></b>
		WD-40 repeat
		<b>GCN5-related N-acetyltransferase</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>PK</b>
		RNA binding protein 1
		<b>Lipocalin</b>
		Protein of unknown function DUF889,

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Cyclopropane fatty acid synthase-like
		<b>NBS-LRR</b>
		<u>Glucosyl hydrolase, beta glucosidase</u>
		beta glucosidase
		Amino acid transporter family
		Pectinesterase family protein
		Amino acid/polyamine transporter II
		Plant invertase/pectin methylesterase inhibitor
		SMC protein, N-terminal
		Sigma-70 region 2
		Resistance protein KR4, related
		<b>NBS LRR</b>
		<b>NBS LRR</b>
		<b>NBS LRR</b>
		<b>NBS LRR</b>
		<b>NBS LRR</b>
		PTP repeat
		Amine oxidase
		LRR
		<b>NBS LRR</b>
		Sigma-70 region 4
		LRR
		Alpha-N-acetylglucosaminidase
		Alpha-N-acetylglucosaminidase precursor
		Alpha-N-acetylglucosaminidase precursor
		<b>NB-ARC LRR</b>
		Homeodomain-like
		<b>NB-ARC LRR</b>
		Cyclin-like F-box
		<b>NB-ARC LRR</b>
		Protein phosphatase 2C-like
		Protein phosphatase
		Protein phosphatase
		Gamma purothionin
		<u>Cycloartenol-C-24-methyltransferase</u>
		<b>NBS-LRR</b>
		AT-hook motif containing protein
		AT-hook motif containing protein
		<b>NBS-LRR</b>
		<b>NBS-LRR</b>
		Putative helicase, related
		Protein of unknown function DUF889, eukaryote
		LRR
		Disease resistance protein
		Disease resistance protein
		S-receptor kinase-like protein , related
		PK
		<b>NBS LRR</b>
		Glucose-inhibited division protein A
		Protein of unknown function DUF889

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		LRR
		LRR
		<b>NBS LRR</b>
		LRR FNIP
		Antiporter/drug transporter
		PTP repeat
		Ribosomal protein S2
		ZFP CCCH type TF
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box, inorganic pyrophosphatase
		Protein of unknown function DUF860
		Protein of unknown function DUF860
		<u>Cellulose synthase</u>
		Cyclin-like F-box
		Cyclin-like F-box
		Prefoldin
		F-box protein interaction domain
		Cyclin-like F-box
		Cyclin-like F-box, xylose isomerase
		Cyclin-like F-box, xylose isomerase
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box (no homol other than Mt)
		Late nodulin
		Cyclin-like F-box
		PTP repeat
		Cyclin-like F-box
		Glycoside hydrolase, family 28
		Actin/actin-like
		Cyclin-like F-box
		Cyclin-like F-box
		Cyclin-like F-box
		MADS-box TF
		MADS-box TF
		Dihydrouridine synthase
		Protein of unknown function DUF1092
		<b>NBS-LRR</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		PTP repeat
AF123696		<b>NBS-LRR</b>
		ZFP C3HC4 type
		<b>Cation/hydrogen exchanger</b>
Y14559		<b><u>Topoisomerase II</u></b>
		<b><u>Nucleic acid binding protein</u></b>
		Syntaxin, putative
		ZFP, CCCH type
		<b>ZFP, CCCH type</b>
		<b>Transferase family protein</b>
AB097768		ZFP, RING-type (partial), makorin
		Transferase
		<b>Uroporphyrin-III C-MT</b>
		Prefoldin
		<b>Asp/Glu racemase; TTP-like</b>
		<b>Disease resistance protein, Myb DNA binding</b>
		<b>Auxin-independent growth promoter-like</b>
		<b>Lipolytic enzyme, G-D-S-L</b>
		<b><u>O-MT family 2</u></b>
		<b>NBS-LRR</b>
		<b>NBS-LRR</b>
		<b>Beta tubulin</b>
		<b>LRR</b>
		<b>LRR</b>
		<b>NBS-LRR</b>
		Protein of unknown function DUF231
		<b>NBS-LRR</b>
		<b>Protein of unknown function DUF231</b>
		Subtilin inhibitor
		<b>NBS-LRR</b>
		<b>Terpenoid synthase-like</b>
		<b>Homeodomain-like</b>
		<b>Calmodulin-binding</b>
		<b>Cytochrome P450</b>
		<b>Isopentenyl transferase-like</b>
		<b>Isopentenyl transferase-like</b>
		<b>Ribosomal protein L27</b>
		Short-chain dehydrogenase/reductase
		<b>TIR disease resistance protein</b>
		<b>TIR disease resistance protein</b>
		<b>NBS-LRR</b>
		<b>NPAC</b>
		hAT family dimerization domain containing protein
		hAT family dimerization domain containing protein
		TIR domain
		<b>Disease resistance protein TIR; LRR</b>
		<b>NBS LRR</b>
		TIR disease resistance protein

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>Gamma thionin; Knottin</b>
		<b>Serine/threonine PK</b>
		Cyclin-like F-box
		Cyclin-like F-box
		<b>NBS-LRR</b>
		<b>NB-ARC LRR</b>
		<b>NB-ARC LRR</b>
		<b>LRR</b>
		<b>LRR</b>
		<b>LRR</b>
		<b>Peptidase A1</b>
		<b>Myb DNA-binding protein</b>
		Thioredoxin-related
		<b><u>Ankyrin motif protein</u></b>
		<b>NB-ARC LRR</b>
		<b>FAR1; ZFP, SWIM-type</b>
		14-3-3 protein
		<b>NB-ARC LRR</b>
		<b><u>ZFP, RING-type</u></b>
		Ribosomal protein L27
		Myb DNA binding region
		Arginine N-methyl transferase, putative
		Cyclin-like F-box
		<b>Progesterone 5-beta-reductase, putative</b>
		<b>LRR-disease resistance protein</b>
		<b>Cyclin-like F-box</b>
		<b>TTP repeat</b>
		<b>Lipid transfer/trypsin-alpha amylase inhibitor</b>
		<b>Heat shock protein 40 DnaJ</b>
		<b>Calcium-binding EF-hand</b>
		<b>LRR</b>
		<b>GRAS TF</b>
		<b>NB-ARC LRR</b>
		<b>GRAS TF</b>
		<b>Endonuclease/exonuclease/phosphatase</b>
		<b>LRR</b>
		<b>Legume lectin, beta domain</b>
		<b>LRR</b>
		Ubiquitin protein binding
		<b>NBS-LRR protein</b>
		<b>Anthranilate phosphoribosyltransferase-like</b>
		<b><u>RNA binding protein</u></b>
		TF IIA (large subunit)
		TF (Tb1 in <i>Z.mays</i> , TCP24 in <i>At</i> )
		clp ATP synthase gamma subunit
		<b>EXOCYST subunit EXO70 family</b>
		Shatterproof 2
		<b><u>3-phosphoserine phosphatase</u></b>
		<b><u>Mitochondrial substrate carrier</u></b>



Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>family</b>
		<b>Mitochondrial carrier protein</b>
		ZFP, CCHC-type
		<b>ZFP, RING-type</b>
		<b>ZFP, CCHC-type</b>
		<b>ZFP, CCHC-type</b>
		<b>Disease resistance protein, AAA ATPase</b>
		<b>Beta-fructofuranosidase</b>
		Nodulation protein related
		<b>DEAD box RNA helicase</b> , embryo defective 1507
		<b>UDP-glucuronosyl/UDP-glucosyltransferase</b>
		<b>GT, group 1</b>
		<b>Phospholipid/glycerol acyltransferase</b>
		<b>Auxin influx carrier</b>
		<b>Chaperonin, T complex protein 1</b>
		Chaperonin Cpn60/TCP-1
		<b>40S ribosomal protein S4/9</b>
		<b>Receptor kinase protein</b>
		Double-stranded RNA binding
		<b>Cyclin-like F-box</b>
		ZFP
		RNA polymerase beta
		<b>PK family</b>
		<b>mRNA capping enzyme, putative</b>
		LRR
		NBS LRR
		GRAS TF
		NBS LRR
		<b>LRR (AAA ATPase)</b>
		<b>LRR (AAA ATPase)</b>
		<b>GRAS TF, scarecrow-like</b>
		<b>NBS LRR</b>
		<b>ZFP, BED-type</b>
		<b>LRR (AAA ATPase)</b>
		<b>LRR (AAA ATPase)</b>
		<b>LRR (AAA ATPase)</b>
		Aldehyde dehydrogenase
		PTP repeat
		<b>Lipolytic enzyme, G-D-S-L</b>
		<b>Cyclin-like F-box</b>
		Phosphatidylinositol 4-phosphate 5-kinase
		<b>Disease resistance protein</b>
		<b>Cyclin-like F-box</b>
		Cytokinin-specific binding protein
		<b>N1-acetyl spermine oxidase, putative</b>
		NBS-LRR protein
		Cyclin-like F box
		DEAD/DEAH box helicase
		Oxysterol binding protein

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>TATA-box associated factor, RNA poly II TF</b>
		SWIB complex BAF60b containing protein
		DNA binding family protein
		<b>EDM2 TF</b>
		Long chain fatty acid O-acyl transferase
AJ277858		<b>Nodulin 22</b> , helicase-related
		Calmodulin-like protein
		Calmodulin-like protein
		Calmodulin-like protein
		Calmodulin-like protein
		<b>Calmodulin-like protein</b>
		clp FtsZ-like protein, C-terminal
		<b>Sodium/hydrogen exchanger subfamily</b>
		Glycerophosphoryl diester phosphodiesterase
		<b>Protein of unknown function DUF889</b>
		<b>Beta 1,2-xylosyltransferase</b>
		<b>NBS LRR</b>
		<b>NBS LRR</b>
		<b>NBS LRR</b>
		ZFP, GRAS TF
		<b>Glycoside hydrolase family</b>
		<b>Peptidase M, NB-ARC domain</b>
		<b>NB-ARC LRR disease resistance protein</b>
		<b>NB-ARC LRR disease resistance protein</b>
		<b>NB-ARC LRR disease resistance protein</b>
		Cyclin-like F box
		Cell differentiation protein Rcd1-like
		<b>RNA polymerase subunit RPB5</b>
		HMG1-HMGY DNA binding
		<b>Beclin 1 protein</b>
		<b>Annexin, type IV, putative</b>
		<b>Annexin</b>
		Annexin
		Annexin
		<b>LRR (AAA ATPase)</b>
		<b>ZFP, CCHC type</b>
		<b>LRR (AAA ATPase)</b>
		<b>LRR (AAA ATPase)</b>
		<b>LRR (AAA ATPase)</b>
		<b>TIR, disease resistance protein</b>
		NADPH-dependent FMN reductase
		PK
		NADPH-dependent FMN reductase
		NADPH-dependent FMN reductase
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box LRR</b>
		<b>Cyclin-like F-box LRR</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		Cyclin-like F-box LRR
		Cyclin-like F-box LRR
		Splicing factor 3B subunit
		Splicing factor 3B subunit
		<b>NBS LRR</b>
		<b>U-box armadillo repeat containing protein</b>
		<b>Secreted glycoprotein 3</b>
AJ311624		Germin-like protein
		Cupin, auxin binding protein
		<b>Rbcsk-1A</b>
		<b>tRNA isopentenyltransferase</b>
		<b>Adenylate isopentenyltransferase</b>
		<b>tRNA isopentenyltransferase</b>
AB194607		<b>Adenylate isopentenyltransferase</b>
		<b>Disease resistance protein AAA ATPase</b>
		<b>Disease resistance protein AAA ATPase</b>
		<b>Disease resistance protein AAA ATPase</b>
		<b>Cyclin-like F-box</b>
		<b>DNA cytosine MT</b>
		<b>Cyclin-like F-box</b>
		<b>Protein of unknown function DUF889</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>ZFP CCHC-type</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Protein of unknown function DUF1191</b>
		<b>Ethylene insensitive 3</b>
		<b>Enzyme inhibitor/pectin methylesterase</b>
		<b>Pectinesterase</b>
		<b>Far-red impaired response protein cAMP response element binding</b>
		<b>Argonaute and DICER protein PAZ</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
		<b>Cyclin-like F-box</b>
EGL1		<b><u>Endo beta 1,4-gluconase</u></b>
		<b>Cell division cycle protein 123 homolog</b>
		<b>ZFP C3HC4-type</b>
		<b>KCPB-interacting PK</b>
		<b>Transporter</b>
		<b>GPI-anchored protein</b>
		<b>Actin-related protein 8</b>
		<b>WD-40 repeat</b>
		<b>Subtilisin-like protease</b>
		<b>WD-40 repeat</b>
		<b>Aminoalcoholphosphotransferase</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		<b>FAD linked oxidase</b>
		<b>FAD linked oxidase</b>
		<b>Berberine-like, FAD linked oxidase</b>
		<b>FAD linked oxidase, berberine</b>
		<b>Cyclin-like F box</b>
		<b>26S proteasome regulatory subunit related</b>
		<b>5'-adenylsulfate reductase 2, plastid</b>
		<b>Ubiquitin-like</b>
		<b>Heat shock protein</b>
		<b>Pectate lyase/Amb allergen</b>
		<b><u>NAD-dependent glycerol-3-phosphate dehydrogenase</u></b>
		<b>Cyclin-like F-box</b>
		<b><u>Translation elongation factor EF-1, alpha subunit</u></b>
		<b><u>Translation elongation factor EF-1, alpha subunit</u></b>
		<b>Small GTPase, rab2</b>
		<b>Activator of basal transcription 1, related</b>
		<b>ZFP, BED type</b>
		<b>Ribosomal protein S7E</b>
		<b>Phosphoribulokinase/uridine kinase</b>
		<b>Lipolytic enzyme, G-D-S-L</b>
		<b>Dienelactone hydrolase</b>
		<b>Protein of unknown function DUF889</b>
		<b>GIN5 complex, Psf1 component</b>
		<b>Trigalactosyldiacylglycerol 1</b>
		<b>Protein of unknown function DUF179</b>
		<b>Phosphatidylinositol-4-phosphate 5-kinase 1, putative</b>
		<b><u>NAD-dependent epimerase/dehydratase</u></b>
		<b><u>NAD-dependent epimerase/dehydratase</u></b>
		<b><u>Homeobox, TF-like</u></b>
		<b>Asp/Glu racemase</b>
		<b>PTP repeat</b>
		<b>Growth regulator protein</b>
		<b>Deoxynucleoside kinase</b>
		<b>Polyneuridinealdehyde esterase, putative</b>
		<b><u>TF b3</u></b>
		<b>40S ribosomal protein S9</b>
		<b>TF b3</b>
		<b>40S ribosomal protein S9</b>
		<b><u>TF b3</u></b>
		<b><u>TF b3</u></b>
		<b><u>NMD</u></b>
		<b>Eukaryotic initiation factor 1A</b>
		<b>MADS box TF (SHP1-like)</b>
		<b>Cellulose synthase-like</b>
		<b><u>Beta galactosidase</u></b>
		<b>Lipolytic enzyme G-D-S-L motif</b>

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		U2 snRNP auxilliary factor, large subunit,
		<b>Cdc PK-like</b>
		<b>Amino acid/polyamine transporter</b>
		CMP/dCMP deaminase, zinc-binding
		Ubiquitin-protein ligase, zinc binding

Pea III genes	Pea III (cM)	Identified Gene/Product in <i>M. truncatula</i>
		DNA mismatch repair protein, mutL
		ZFP (SWIM type)
		Fe hydrogenase
		FAR1 family putative
		RING-H2 protein

### List of abbreviations in Table 1

AA	amino acid
AAA	ATPases associated with diverse cellular activities
ATM	ataxia-telangiectasia butated
BRCT	breast cancer C terminal domain
BTB	bric-a-brac, tramtrack, broad-complex
BURP	BNM2/USP/RD22/polygalacturonase domain
CCT	cytosolic chaperonin
Clp	chloroplast specific
DH	dehydrogenase
EMB	embryonic body wall muscle domain
FGGY	fucolo/glucono/glycerol/xylulokinase type
GINS	Go-Ichi-Ni-San or 5-1-2-3
GT	glucosyl transferase
HLH	helix-loop-helix
HMA	heavy metal associated
HMG	high mobility group
HMY	human myelin basic domain
HORMA	Hop1p, Rev7p and MAD2 domain
HTH	helix-turn-helix
IQ	isoleucine/glutamine domain
KH	KH domain
LRR	leucine-rich repeat
MATH	meprin and TRAF homology domain
MFS	major facilitator superfamily
MDR	multidrug resistant
MT	methyl transferase
NBS	nucleotide binding site
NFU	NiFU protein
NMD	nonsense mediated mRNA decay
NPH	split pleckstrin homology domain
PAZ	piwi argonaute zwillie domain
PDI	protein disulfide isomerase
PK	protein kinase
POZ	poxvirus zinc finger
PTP	pentatricopeptide repeat
PUG	peptide:N-glycanase domain
SAUR	small auxin up RNA
SWIB	SWI/SNF complex, including complex B domain
SWIRM	Swi3 and Rs88 domain
TF	transcription factor
TGF	transforming growth factor
TIR	Toll/Interleukin-1 receptor domain
TRAF	TNF-receptor associated factor
TTP	tetratricopeptide repeat
WNK	with no lysine
WRKY	tryptophan/arginine/lysine /tyrosine domain
YGGT	tyrosine/glycine/glycine/threonine
ZFP	zinc finger protein

