

pantherGeneList

**Supplementary Table 5.** List of genes with differentially methylated W-boxes in their vicinity

Gene ID		UniProtKB	Mapped IDs
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**Gene name; Gene symbol**

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 Transmembrane protein;At1g47389;ortholog  
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 Putative membrane lipoprotein;At4g30770;ortholog  
 Adagio protein 1;ADO1;ortholog  
 Putative auxin response factor 15;ARF15;ortholog  
 Uncharacterized protein;At2g07798;ortholog  
 Defensin-like protein 32;At1g35537;ortholog  
 DC1 domain-containing protein;At4g02180;ortholog  
 SelT-like protein;At3g47300;ortholog  
 Putative Ta11-like non-LTR retroelement protein;At2g13510;ortholog  
 Cystatin/monellin superfamily protein;At5g17120;ortholog  
 F-box associated ubiquitination effector family protein;At1g47350;ortholog  
 Putative Ta11-like non-LTR retroelement protein;At2g13500;ortholog  
 CDPK-related kinase 6;CRK6;ortholog  
 AT3g56680/T8M16\_10;T8M16\_10;ortholog  
 BRCT domain-containing DNA repair protein;At3g43930;ortholog  
 ATR interacting protein;AtATRIP;ortholog  
 Preprotein translocase subunit SCY2, chloroplastic;SCY2;ortholog  
 Putative defensin-like protein 225;SCRL1;ortholog  
 Uncharacterized protein AT4g03740;At4g03740;ortholog  
 Putative DEAD-box ATP-dependent RNA helicase 33;RH33;ortholog  
 Katanin p80 WD40 repeat-containing subunit B1 homolog;DWA3;ortholog  
 Threonyl and alanyl tRNA synthetase second additional domain-containing protein;At3g16565;ortholog  
 Eukaryotic translation initiation factor 4B1;EIF4B1;ortholog  
 Heavy metal transport/detoxification superfamily protein;At3g24450;ortholog  
 Protein PLANT CADMIUM RESISTANCE 6;PCR6;ortholog  
 Glutamyl-tRNA(Gln) amidotransferase subunit B, chloroplastic/mitochondrial;GATB;ortholog  
 Proline iminopeptidase;PIP;ortholog  
 Gibberellin 20-oxidase-like protein;At5g51310;ortholog

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Uncharacterized protein T15B3\_20;T15B3\_20;ortholog  
Uncharacterized protein;At3g32960;ortholog  
Putative defensin-like protein 168;At3g50925;ortholog  
Glucosyltransferase-like protein (Fragment);At4g15270;ortholog  
CSC1-like protein At4g02900;At4g02900;ortholog  
Uncharacterized protein F15D2.6;At1g29480;ortholog  
Protein transport protein SEC13 homolog A;SEC13A;ortholog  
Sphingolipid delta(4)-desaturase DES1-like;At4g04930;ortholog  
Syntaxin-122;SYP122;ortholog  
Putative membrane lipoprotein;At5g26717;ortholog  
Uncharacterized protein;At1g53265;ortholog  
Putative Ta11-like non-LTR retroelement protein;At2g41590;ortholog  
Probable WRKY transcription factor 74;WRKY74;ortholog  
Cytochrome P450 71B23;CYP71B23;ortholog  
FBD-associated F-box protein At5g38590;At5g38590;ortholog  
Bidirectional sugar transporter SWEET6;SWEET6;ortholog  
Classical arabinogalactan protein 10;AGP10;ortholog  
Cysteine/Histidine-rich C1 domain family protein;At2g02610;ortholog  
UDP-glycosyltransferase 84A4;UGT84A4;ortholog  
Cysteine-rich receptor-like protein kinase 36;CRK36;ortholog  
DNA mismatch repair protein MLH1;MLH1;ortholog  
At4g06536;At4g06536;ortholog  
Uncharacterized protein;At2g07772;ortholog  
L-galactono-1,4-lactone dehydrogenase, mitochondrial;GLDH;ortholog  
At1g30160;At1g30160;ortholog  
At2g24970;At2g24970;ortholog  
Uncharacterized protein;At1g38790;ortholog  
Glutathione S-transferase F14;GSTF14;ortholog  
Uncharacterized protein;At3g31350;ortholog  
Uncharacterized protein;At1g65346;ortholog  
Putative Ta11-like non-LTR retroelement protein;At2g13450;ortholog  
Transcription factor-like protein;At2g07714;ortholog  
ATP synthase subunit 9, mitochondrial;atp9;ortholog  
Deoxyribodipyrimidine photo-lyase;PHR1;ortholog  
Uncharacterized protein;At2g06908;ortholog  
Probable transcription repressor OFP9;OFP9;ortholog  
Probable WRKY transcription factor 41;WRKY41;ortholog  
F-box/LRR-repeat protein At1g55660;At1g55660;ortholog  
T26F17.18;At1g21950;ortholog  
Protein TORNADO 2;TRN2;ortholog  
Uncharacterized protein;At3g43970;ortholog  
Uncharacterized protein;At4g13572;ortholog  
Kinase superfamily with octicosapeptide/Phox/Bem1p domain-containing protein;MUA2.19;ortholog  
Probable chlorophyll(ide) b reductase NYC1, chloroplastic;NYC1;ortholog  
NHL domain-containing protein;At5g28660;ortholog  
Emb;CAB89405.1;ortholog  
RING/U-box protein with C6HC-type zinc finger protein;At3g45525;ortholog  
Nucleic acid-binding, OB-fold-like protein;At2g07715;ortholog  
Cysteine-rich receptor-like protein kinase 37;CRK37;ortholog  
UDP-glycosyltransferase 76E7;UGT76E7;ortholog  
Glutamate-1-semialdehyde 2,1-aminomutase 2, chloroplastic;GSA2;ortholog

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Putative F-box protein At5g15670;At5g15670;ortholog  
30S ribosomal protein S1, chloroplastic;RPS1;ortholog  
Probable prolyl 4-hydroxylase 3;P4H3;ortholog  
Chloroplast nucleoid DNA-binding protein-like;At5g45120;ortholog  
At1g47970;T2J15.12;ortholog  
Probable E3 ubiquitin-protein ligase ARI16;ARI16;ortholog  
Uncharacterized protein;At3g24516;ortholog  
Alpha/beta-Hydrolases superfamily protein;F11F8\_28;ortholog  
Shaggy-related protein kinase theta;ASK8;ortholog  
Pentatricopeptide repeat-containing protein At3g22690;PCMP-H56;ortholog  
Cysteine/Histidine-rich C1 domain family protein;At2g13895;ortholog  
At4g21310;At4g21310;ortholog  
Chloride channel protein CLC-d;CLC-D;ortholog  
At5g38195;At5g38195;ortholog  
Jacalin-related lectin 5;JAL5;ortholog  
Uncharacterized protein;At2g01023;ortholog  
RINT1-like protein MAG2;MAG2;ortholog  
Pyridoxal 5'-phosphate synthase PDX1-like 4;PDX1L4;ortholog  
Transmembrane protein;At5g34829;ortholog  
Dihydrolipoyl dehydrogenase 1, chloroplastic;LPD1;ortholog  
Retrotransposon ORF-1 protein;At3g30820;ortholog  
Nucleic acid/zinc ion-binding protein;At2g02835;ortholog  
Growth-regulating factor 3;GRF3;ortholog  
Berberine bridge enzyme-like 13;At1g30760;ortholog  
Protein AIG2 B;AIG2B;ortholog  
Protein RRP6-like 2;RRP6L2;ortholog  
Transmembrane protein;At2g07674;ortholog  
Protein SPEAR1;SPEAR1;ortholog  
Uncharacterized protein;At4g04423;ortholog  
Cyclin-B1-5;CYCB1-5;ortholog  
Glutathione reductase, chloroplastic;EMB2360;ortholog  
Putative chloride channel-like protein CLC-g;CLC-G;ortholog  
At1g43860;At1g43860;ortholog  
Cystatin/monellin superfamily protein;At4g03565;ortholog  
DEAD/DEAH-box RNA helicase family protein;At1g36020;ortholog  
Protein MICROTUBULE BINDING PROTEIN 2C;MBP2C;ortholog  
Uncharacterized protein At2g11570;At2g11570;ortholog  
Metal transporter Nramp2;NRAMP2;ortholog  
Extensin-like protein;At4g08370;ortholog  
Alpha/beta-Hydrolases superfamily protein;At2g32520;ortholog  
Ubiquitin-like superfamily protein;At4g05310;ortholog  
AT3g45441;At3g45443;ortholog  
Vacuolar iron transporter homolog 3;At3g43630;ortholog  
Protein root UVB sensitive 4;RUS4;ortholog  
Probable protein phosphatase 2C 10;At1g34750;ortholog  
Protein REVERSION-TO-ETHYLENE SENSITIVITY1;RTE1;ortholog  
Nucleic acid-binding/zinc ion-binding protein;At3g31950;ortholog  
Aspartic/glutamic acid-rich protein;At5g17160;ortholog  
Pyrophosphate--fructose 6-phosphate 1-phosphotransferase subunit beta 2;PFP-BETA2;ortholog  
Ubiquitin-like superfamily protein;At4g05250;ortholog  
CBBY-like protein;CBBY;ortholog

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Uncharacterized protein;At2g07684;ortholog  
HXXXD-type acyl-transferase family protein;At3g29690;ortholog  
BAHD acyltransferase At5g47980;BAHD1;ortholog  
Probable WRKY transcription factor 64;WRKY64;ortholog  
BAG family molecular chaperone regulator 1;BAG1;ortholog  
Uncharacterized protein;At3g29080;ortholog  
Pollen Ole e 1 allergen and extensin family protein;At2g41390;ortholog  
Protein CDC73 homolog;CDC73;ortholog  
AT4g08810/T32A17\_120;AT4G08810.1;ortholog  
Defensin-like protein 1;PDF2.3;ortholog  
Arabinosyltransferase XEG113;XEG113;ortholog  
Cytochrome P450, family 702, subfamily A, polypeptide 5;CYP702A5;ortholog  
Uncharacterized protein;At3g43682;ortholog  
Retrotransposon ORF-1 protein;At3g44570;ortholog  
Protein BOLA4, chloroplastic/mitochondrial;BOLA4;ortholog  
DNA-binding protein S1FA2;S1FA2;ortholog  
Emb;CAB89038.1;ortholog  
Pectinesterase inhibitor 3;PMEI3;ortholog  
At2g32130;At2g32130;ortholog  
UDP-glycosyltransferase 71B5;UGT71B5;ortholog  
HSP40/DnaJ peptide-binding protein;At1g44160;ortholog  
C2H2-like zinc finger protein;At2g18490;ortholog  
Formin-like protein 1;FH1;ortholog  
Beta-galactosidase 12;BGAL12;ortholog  
NAC (No Apical Meristem) domain transcriptional regulator superfamily protein;At1g35890;ortholog  
Acyl thioesterase-like protein;At1g18773;ortholog  
CSL zinc finger domain-containing protein;At2g15910;ortholog  
Transmembrane protein, putative (DUF1985);At1g36970;ortholog  
At2g12290;At2g12290;ortholog  
Ribonuclease TUDOR 2;TSN2;ortholog  
Pectinesterase inhibitor 10;PMEI10;ortholog  
UDP-glycosyltransferase 76E3;UGT76E3;ortholog  
Protein TIFY 3A;TIFY3A;ortholog  
Nucleic acid binding / zinc ion binding protein;At2g17920;ortholog  
AT5g35440/MOK9\_2;MOK9.1;ortholog  
Purple acid phosphatase 8;PAP8;ortholog  
AP-1 complex subunit sigma-2;AAP19-2;ortholog  
Serine/threonine-protein phosphatase PP1 isozyme 4;TOPP4;ortholog  
ClpC-like protein;F9K21.30;ortholog  
Photosystem I chlorophyll a/b-binding protein 3-1, chloroplastic;LHCA3;ortholog  
3-ketoacyl-CoA synthase 13;HIC;ortholog  
Mediator of RNA polymerase II transcription subunit 8;MED8;ortholog  
Pyridoxal 5'-phosphate synthase subunit PDX1.1;PDX11;ortholog  
Probable UDP-3-O-acyl-N-acetylglucosamine deacetylase 5, mitochondrial;LPXC5;ortholog  
Cysteine proteinases superfamily protein;At1g37020;ortholog  
Uncharacterized protein;At5g29050;ortholog  
Protein LONG AFTER FAR-RED 3;LAF3;ortholog  
Uncharacterized GPI-anchored protein At5g19240;At5g19240;ortholog  
Bifunctional dethiobiotin synthetase/7,8-diamino-pelargonic acid aminotransferase, mitochondrial;BIO3-BIO1;ortho  
Lipase-like PAD4;PAD4;ortholog  
GPI transamidase subunit PIG-U;At1g12730;ortholog

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At1g47640/F16N3\_6;At1g47640;ortholog  
Uncharacterized membrane protein At4g09580;At4g09580;ortholog  
Defensin-like protein 4;PDF2.1;ortholog  
Probable fucosyltransferase 5;FUT5;ortholog  
At4g11300;At4g11300;ortholog  
Translocon outer membrane complex 75-l;TOC75-l;ortholog  
Neurofilament heavy protein;dl4530c;ortholog  
bZIP transcription factor 49;BZIP49;ortholog  
Structural maintenance of chromosomes protein 1;SMC1;ortholog  
Ran-binding protein M homolog;RANBPM;ortholog  
Protein YIPF;At5g27490;ortholog  
N-lysine methyltransferase;At3g56570;ortholog  
ATP-dependent 6-phosphofructokinase 2;PFK2;ortholog  
Persulfide dioxygenase ETHE1 homolog, mitochondrial;GLY3;ortholog  
Probable disease resistance protein At5g47250;At5g47250;ortholog  
Pyruvate decarboxylase 3;PDC3;ortholog  
Glycine-rich protein family;At2g05580;ortholog  
Single-stranded DNA-binding protein, mitochondrial;At4g11060;ortholog  
Uncharacterized protein At2g07721;At2g07721;ortholog  
Thioredoxin H5;TRX5;ortholog  
At1g29640;At1g29640;ortholog  
Uncharacterized protein At2g07000;At2g07000;ortholog  
26S proteasome non-ATPase regulatory subunit 3 homolog B;RPN3B;ortholog  
Uncharacterized protein F15C21.12;At1g36230;ortholog  
Sodium/hydrogen exchanger 1;NHX1;ortholog  
Uncharacterized protein T14D3.140;T14D3.140;ortholog  
Auxin-responsive protein SAUR68;SAUR68;ortholog  
Uncharacterized protein;At3g55860;ortholog  
BURP domain protein RD22;RD22;ortholog  
ARM repeat superfamily protein;EMB2656;ortholog  
UDP-glycosyltransferase 91A1;UGT91A1;ortholog  
Chitinase-like protein 2;CTL2;ortholog  
Uncharacterized GPI-anchored protein At5g19250;At5g19250;ortholog  
AT5g13210/T31B5\_30;At5g13210;ortholog  
F-box protein At5g03100;At5g03100;ortholog  
Proline-rich extensin-like family protein;At5g06630;ortholog  
DVL11;DVL11;ortholog  
Glutamate receptor 3.1;GLR3.1;ortholog  
Alanine--tRNA ligase;ALATS;ortholog  
Defensin-like protein 113;At5g27495;ortholog  
Leucine-rich repeat (LRR) family protein;At1g33590;ortholog  
Anther-specific protein agp1-like protein;At3g26110;ortholog  
Myosin-4 protein (DUF641);At4g33320;ortholog  
Excitatory amino acid transporter;At4g20150;ortholog  
Uncharacterized protein;At1g40083;ortholog  
AAA-ATPase At3g28600;At3g28600;ortholog  
Uncharacterized protein AT4g11930;At4g11930;ortholog  
At2g28120/F24D13.9;OTU1;ortholog  
Cysteine-rich repeat secretory protein 41;CRRSP41;ortholog  
Transmembrane protein;At4g09210;ortholog  
E3 ubiquitin-protein ligase BAH1;BAH1;ortholog



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Uncharacterized protein At2g18920;At2g18920;ortholog  
Cytochrome b;MT-CYB;ortholog  
1-aminocyclopropane-1-carboxylate synthase-like protein 1;ACS1;ortholog  
S-adenosyl-L-methionine-dependent methyltransferases superfamily protein;At2g14060;ortholog  
At5g55640;MDF20.8;ortholog  
Uncharacterized protein AT4g03830;At4g03830;ortholog  
Uncharacterized protein F12A4.5;At1g35410;ortholog  
Pectin lyase-like superfamily protein;At2g26620;ortholog  
Rapid alkalization factor 23;RALF23;ortholog  
Transmembrane protein, putative (DUF1216);At3g28790;ortholog  
F20P5.24 protein;At1g70020;ortholog  
Alpha/beta-Hydrolases superfamily protein;At3g48410;ortholog  
SH3 domain-containing protein;At2g07360;ortholog  
Myb/SANT-like DNA-binding domain protein;At3g11290;ortholog  
NAC domain-containing protein 100;NAC100;ortholog  
Plant self-incompatibility protein S1 family protein;At3g16960;ortholog  
Somatic embryogenesis receptor kinase 5;SERK5;ortholog  
Glycine-rich protein;At3g29033;ortholog  
Adagio protein 2;ADO2;ortholog  
Protein NRT1/ PTR FAMILY 8.2;NPF8.2;ortholog  
26S proteasome non-ATPase regulatory subunit 13 homolog A;RPN9A;ortholog  
RNA-dependent RNA polymerase 1;RDR1;ortholog  
C2 domain-containing protein At1g53590;NTMC2T6.1;ortholog  
Monogalactosyldiacylglycerol synthase 3, chloroplastic;MGD3;ortholog  
At1g18760;At1g18760;ortholog  
Jacalin-related lectin 44;JAL44;ortholog  
BEL1-like homeodomain protein 9;BLH9;ortholog  
Bifunctional inhibitor/lipid-transfer protein/seed storage 2S albumin superfamily protein;At1g12100;ortholog  
C-8 sterol isomerase;At1g05440;ortholog  
Probable protein phosphatase 2C 12;At1g47380;ortholog  
Protein COFACTOR ASSEMBLY OF COMPLEX C SUBUNIT B CCB3, chloroplastic;CCB3;ortholog  
Antigenic heat-stable protein;At1g56420;ortholog  
Transmembrane protein;At4g09260;ortholog  
Non-lysosomal glucosylceramidase;At4g10060;ortholog  
Auxin-responsive GH3 family protein;At5g13360;ortholog  
Uncharacterized protein;At1g32337;ortholog  
Calcium-transporting ATPase 4, plasma membrane-type;ACA4;ortholog  
Proline-rich extensin-like family protein;At1g26250;ortholog  
60S acidic ribosomal protein P2-5;RPP2E;ortholog  
Glucosidase-like protein;F12A12.90;ortholog  
Ankyrin repeat family protein;MIK22.12;ortholog  
Probable 3-ketoacyl-CoA synthase 21;KCS21;ortholog  
Bacterial hemolysin-like protein;At3g25470;ortholog  
Myosin-4 protein (DUF641);At4g34080;ortholog  
At2g07350/T13E11.12;PFD1;ortholog  
Magnesium-chelatase subunit ChII-2, chloroplastic;CHLI2;ortholog  
Uncharacterized protein;At2g06555;ortholog  
Similarity to unknown protein;At5g37920;ortholog  
F-box associated ubiquitination effector family protein;At1g49790;ortholog  
Ubiquitin-like domain-containing CTD phosphatase;At4g06599;ortholog  
Protein SET DOMAIN GROUP 41;SDG41;ortholog

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Stromal cell-derived factor 2-like protein;SDF2;ortholog  
Uncharacterized protein At2g05350;At2g05350;ortholog  
Acyl-CoA N-acyltransferases (NAT) superfamily protein;At2g32020;ortholog  
At1g49010;At1g49010;ortholog  
Uncharacterized protein At2g24330;At2g24330;ortholog  
Cysteine/Histidine-rich C1 domain family protein;At5g02330;ortholog  
HIT zinc finger and PAPA-1-like domain-containing protein;At1g56460;ortholog  
40S ribosomal protein S24-2;RPS24B;ortholog  
Plant thionin family protein;At1g34792;ortholog  
Nuclease;At5g28730;ortholog  
Probable E3 ubiquitin-protein ligase RHY1A;RHY1A;ortholog  
Putative defensin-like protein 102;At4g08028;ortholog  
Zinc finger CCCH domain-containing protein 19;NERD;ortholog  
Protein RALF-like 25;RALFL25;ortholog  
Putative F-box/kelch-repeat protein At3g22870;At3g22870;ortholog  
Pentatricopeptide repeat-containing protein At3g62470, mitochondrial;At3g62470;ortholog  
Histone H2A.8;At4g13570;ortholog  
Ubiquitin carboxyl-terminal hydrolase-related protein;At3g47910;ortholog  
Uncharacterized protein;At3g42786;ortholog  
Cellulose synthase-like protein B3;CSLB3;ortholog  
AT5G45030 protein;At5g45030;ortholog  
Protein KINESIN LIGHT CHAIN-RELATED 1;KLCR1;ortholog  
E3 ubiquitin-protein ligase MBR1;MBR1;ortholog  
F-box family protein;At1g36030;ortholog  
Putative endonuclease or glycosyl hydrolase;At4g20480;ortholog  
Anthocyanin acyltransferase-like protein;At3g29635;ortholog  
RHOMBOID-like protein 7;RBL7;ortholog  
Outer envelope membrane protein 7;OEP7;ortholog  
RNA-binding (RRM/RBD/RNP motifs) family protein;At1g33470;ortholog  
Plant thionin family protein;At1g35035;ortholog  
At5g27710;At5g27710;ortholog  
Ribosomal protein S12, mitochondrial;RPS12;ortholog  
Eukaryotic aspartyl protease family protein;At3g29750;ortholog  
Beta-D-xylosidase 3;BXL3;ortholog  
O-acyltransferase (WSD1-like) family protein;At2g38995;ortholog  
Ubiquitin system component Cue protein;At5g32440;ortholog  
Polyadenylation and cleavage factor homolog 5;PCFS5;ortholog  
At1g19480;At1g19480;ortholog  
Calmodulin-binding transcription activator 6;CAMTA6;ortholog  
Uncharacterized protein;At3g43432;ortholog  
Ethylene-responsive transcription factor RAP2-1;RAP2-1;ortholog  
Disease resistance protein RPP2B;RPP2B;ortholog  
Protein SINE2;SINE2;ortholog  
Rhodanese-like domain-containing protein 4A, chloroplastic;STR4A;ortholog  
Laccase-10;LAC10;ortholog  
Uncharacterized protein;At2g07830;ortholog  
Berberine bridge enzyme-like 26;At5g44400;ortholog  
D-cysteine desulfhydrase 2, mitochondrial;At3g26115;ortholog  
Oxygen-evolving enhancer protein 3-2, chloroplastic;PSBQ2;ortholog  
F-box protein At1g49360;At1g49360;ortholog  
At5g24155;At5g24155;ortholog

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Probable aquaporin NIP4-2;NIP4-2;ortholog  
Ubiquitin-like-specific protease 1D;ULP1D;ortholog  
Uncharacterized protein;At5g35732;ortholog  
Probable glutamate carboxypeptidase AMP1;AMP1;ortholog  
ECA1 gametogenesis family protein (DUF784);At2g04041;ortholog  
At4g33310;At4g33310;ortholog  
Plant thionin family protein;At1g34860;ortholog  
Probable purine permease 13;PUP13;ortholog  
Importin subunit alpha-3;IMPA3;ortholog  
WAT1-related protein At1g43650;At1g43650;ortholog  
Peptidase C15, pyroglutamyl peptidase I-like protein;At1g23430;ortholog  
Protein kinase superfamily protein;ATATH8;ortholog  
Uncharacterized protein;At1g20405;ortholog  
Nicotinamidase 1;NIC1;ortholog  
Uncharacterized protein;At2g15110;ortholog  
Prolyl 4-hydroxylase 5;P4H5;ortholog  
TRAF-like family protein;At2g15710;ortholog  
Tryptophan aminotransferase-related protein 1;TAR1;ortholog  
Uncharacterized protein;At3g33494;ortholog  
Plant intracellular Ras-group-related LRR protein 2;PIRL2;ortholog  
Expansin-B5;EXPB5;ortholog  
Late embryogenesis abundant protein, group 2;At3g24600;ortholog  
Kinesin-like protein KIN-14D;KIN14D;ortholog  
At3g48510;T8P19.20;ortholog  
Mto 1 responding down protein;At5g03090;ortholog  
Transmembrane protein;At5g50175;ortholog  
Pentatricopeptide repeat-containing protein At2g35130;At2g35130;ortholog  
Serine/threonine-protein kinase-like protein CCR2;CCR2;ortholog  
Patellin-2;PATL2;ortholog  
Pumilio homolog 14;APUM14;ortholog  
CHP-rich zinc finger protein-like;At5g37620;ortholog  
Zinc finger protein JACKDAW;JKD;ortholog  
Uncharacterized protein;At3g28918;ortholog  
NADPH-dependent aldehyde reductase-like protein, chloroplastic;At3g03980;ortholog  
NAC domain-containing protein 3;NAC003;ortholog  
Proline-rich extensin-like family protein;EXT6;ortholog  
O-fucosyltransferase 5;OFUT5;ortholog  
Uncharacterized mitochondrial protein AtMg00170/AtMg00620;At2g07722;ortholog  
Pentatricopeptide repeat-containing protein At2g15980;At2g15980;ortholog  
Rubisco accumulation factor 1.1, chloroplastic;RAF1.1;ortholog  
Probable boron transporter 6;BOR6;ortholog  
LRR receptor-like Serine/Threonine-kinase;At3g46350;ortholog  
Putative CCR4-associated factor 1 homolog 3;CAF1-3;ortholog  
Calcium-binding EF-hand family protein;At4g34070;ortholog  
Equilibrative nucleotide transporter 4;ENT4;ortholog  
Myb domain protein 110;MYB110;ortholog  
Lactoylglutathione lyase;At1g08110;ortholog  
Methyl-CpG-binding domain-containing protein 5;MBD5;ortholog  
Uncharacterized protein;At2g07787;ortholog  
RING/U-box superfamily protein;MYC6.13;ortholog  
Protein tesmin/TSO1-like CXC 6;TCX6;ortholog

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Uncharacterized protein;At1g34400;ortholog  
Uncharacterized protein;At1g47265;ortholog  
3-ketoacyl-CoA synthase 11;KCS11;ortholog  
Uncharacterized protein;At3g09120;ortholog  
Kinesin-like protein KIN-4B;KIN4B;ortholog  
Ta11-like non-LTR retrotransposon;At5g25200;ortholog  
Uncharacterized protein;At2g07825;ortholog  
Protein DETOXIFICATION 8;DTX8;ortholog  
Ethylene-responsive transcription factor 5;ERF5;ortholog  
Histone H4;At5g59970;ortholog  
Splicing factor PWI domain-containing protein / RNA recognition motif (RRM)-containing protein;At1g60200;ortholog  
At2g15345;At2g15345;ortholog  
SNF1-related protein kinase catalytic subunit alpha KIN11;KIN11;ortholog  
Purple acid phosphatase 15;PAP15;ortholog  
Probable UDP-3-O-acyl-N-acetylglucosamine deacetylase 1, mitochondrial;LPXC1;ortholog  
Expressed protein;At2g40960;ortholog  
Putative F-box protein At1g47915;At1g47915;ortholog  
Protein FIZZY-RELATED 1;FZR1;ortholog  
40S ribosomal protein S23-1;RPS23A;ortholog  
Cyclin-dependent kinase F-1;CDKF-1;ortholog  
Cysteine-rich receptor-like protein kinase 1;CRK1;ortholog  
Probable disease resistance protein At4g33300;At4g33300;ortholog  
Zinc finger protein BRUTUS-like At1g18910;At1g18910;ortholog  
CHP-rich zinc finger protein-like;MPO12.30;ortholog  
Acyl-CoA-binding domain-containing protein 4;ACBP4;ortholog  
Glutathione S-transferase U22;GSTU22;ortholog  
Uncharacterized protein T32O22\_6;At1g36756;ortholog  
Cysteine/Histidine-rich C1 domain family protein;At2g21850;ortholog  
Uncharacterized protein;At1g34910;ortholog  
SIT4 phosphatase-associated family protein;At3g45190;ortholog  
Putative auxin response factor 14;ARF14;ortholog  
ADC synthase superfamily protein;At3g55870;ortholog  
Tetratricopeptide repeat (TPR)-like superfamily protein;At5g28340;ortholog  
NADH-ubiquinone oxidoreductase chain 3;51141.TRNA-ILE-1;ortholog  
Putative 60S ribosomal protein L30-1;RPL30A;ortholog  
Transmembrane protein;At2g02498;ortholog  
Cofactor-independent phosphoglycerate mutase;At4g09520;ortholog  
Got1/Sft2-like vesicle transport protein family;At1g05785;ortholog  
AT4g10280/F24G24\_80;F24G24.80;ortholog  
Alpha/beta-Hydrolases superfamily protein;At5g19630;ortholog  
Putative membrane lipoprotein;At5g26692;ortholog  
G-protein coupled receptor 1;GCR1;ortholog  
Ribosomal protein S12;rps12;ortholog  
Expressed protein;At2g14835;ortholog  
Cyclophilin;At1g44478;ortholog  
Proline-rich protein 2;PRP2;ortholog  
Uncharacterized protein;At2g43865;ortholog  
RING/U-box superfamily protein;At5g01960;ortholog  
Protein kinase superfamily protein;At5g27510;ortholog  
DNase I-like superfamily protein;At1g40390;ortholog  
Bifunctional inhibitor/lipid-transfer protein/seed storage 2S albumin superfamily protein;At3g22570;ortholog

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Prefoldin chaperone subunit family protein;At5g27330;ortholog  
Acyl-CoA N-acyltransferases (NAT) superfamily protein;At2g32030;ortholog  
Eukaryotic translation initiation factor 3 subunit C;TIF3C2;ortholog  
AT2G17320 protein;At2g17320;ortholog  
RING/U-box superfamily protein;At1g21960;ortholog  
Malate dehydrogenase 1, peroxisomal;PMDH1;ortholog  
Nucleic acid-binding, OB-fold-like protein;At1g14800;ortholog  
SUMO-activating enzyme subunit 2;SAE2;ortholog  
Protein HYPER-SENSITIVITY-RELATED 4;HSR4;ortholog  
MutS2;T15B3\_50;ortholog  
Cell wall / vacuolar inhibitor of fructosidase 1;C/VIF1;ortholog  
Probable E3 ubiquitin-protein ligase ARI2;ARI2;ortholog  
CASP-like protein 1C1;At4g03540;ortholog  
Nuclear/nucleolar GTPase 2;NUG2;ortholog  
Folate-biopterin transporter 1, chloroplastic;At2g32040;ortholog  
Cytochrome P450 714A1;CYP714A1;ortholog  
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit 3, mitochondrial;SDH2-3;ortholog  
Bifunctional inhibitor/lipid-transfer protein/seed storage 2S albumin superfamily protein;At1g05450;ortholog  
Ribonuclease H2 subunit A;At2g25100;ortholog  
F-box protein At5g46170;At5g46170;ortholog  
Myosin heavy chain-like protein;F4M19\_20;ortholog  
UDP-glycosyltransferase 72D1;UGT72D1;ortholog  
Glucose-6-phosphate 1-dehydrogenase 1, chloroplastic;G6PD1;ortholog  
Putative receptor-like protein kinase At4g00960;At4g00960;ortholog  
Uncharacterized protein;At5g45573;ortholog  
Golgin family A protein;At4g20160;ortholog  
F-box protein At3g17710;At3g17710;ortholog  
T2E6.7;At1g47820;ortholog  
VQ motif-containing protein 5;VQ5;ortholog  
Glucose-inhibited division family A protein;At2g13440;ortholog  
Probable methyltransferase PMT15;At4g00750;ortholog  
Peroxidase 8;PER8;ortholog  
LOB domain-containing protein 9;LBD9;ortholog  
Heat shock 70 kDa protein 8;HSP70-8;ortholog  
Cell division control protein 6 homolog B;CDC6B;ortholog  
Plant transposase (Ptta/En/Spm family);At1g40087;ortholog  
Probable polygalacturonase At2g43860;At2g43860;ortholog  
PsbP domain-containing protein 1, chloroplastic;PPD1;ortholog  
Protein kinase superfamily protein;At3g26700;ortholog  
RNI-like superfamily protein;At1g47920;ortholog  
Plant self-incompatibility protein S1 family;At3g55254;ortholog  
F13F21.11 protein;At1g49450;ortholog  
F-box protein At3g27290;At3g27290;ortholog  
F-box protein At3g22700;At3g22700;ortholog  
Membrane related protein-like;At3g23080;ortholog  
Cytochrome P450 71B12;CYP71B12;ortholog  
Gamma carbonic anhydrase 2, mitochondrial;GAMMACA2;ortholog  
General transcription factor 2-related zinc finger protein;At3g30235;ortholog  
B3 domain-containing protein At2g24670;At2g24670;ortholog  
Allyl alcohol dehydrogenase; NADP-dependent oxidoreductase-like protein;At5g37980;ortholog  
Heat stress transcription factor A-1d;HSFA1D;ortholog

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Berberine bridge enzyme-like 27;At5g44410;ortholog  
Proline-rich receptor-like protein kinase PERK8;PERK8;ortholog  
NAC domain-containing protein 105;NAC105;ortholog  
DEAD-box ATP-dependent RNA helicase 58, chloroplastic;RH58;ortholog  
YbaK/aminoacyl-tRNA synthetase-associated domain-containing protein;At1g44835;ortholog  
Transferase-like protein;At3g29636;ortholog  
Uncharacterized protein;At5g28560;ortholog  
Uncharacterized protein;At1g49032;ortholog  
Cation/H(+) antiporter 18;CHX18;ortholog  
CLAVATA3/ESR (CLE)-related protein 11;CLE11;ortholog  
Uncharacterized protein At1g65760;At1g65760;ortholog

**PANTHER Family/Subfamily**

CYSTEINE/HISTIDINE-RICH C1 DOMAIN FAMILY PROTEIN (PTHR46477:SF3)  
PROTEIN FAM50A (PTHR12722:SF0)  
F-BOX PROTEIN PP2-A12 (PTHR31960:SF22)

DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB9 (PTHR11239:SF1)  
40S RIBOSOMAL PROTEIN S29 (PTHR12010:SF14)  
MITOCHONDRIAL SUBSTRATE CARRIER FAMILY PROTEIN (PTHR45667:SF11)  
C2 DOMAIN-CONTAINING PROTEIN-RELATED (PTHR38365:SF1)  
PROTEIN PHOSPHATASE METHYLESTERASE 1 (PTHR14189:SF0)  
CYTOCHROME B (PTHR19271:SF16)  
UBIQUITIN-CONJUGATING ENZYME E2 VARIANT 3 (PTHR24068:SF159)  
UBIQUITIN CARBOXYL-TERMINAL HYDROLASE 32 (PTHR21646:SF46)  
TYROSINE-PROTEIN PHOSPHATASE DSP5 (PTHR31126:SF46)  
GAMMA INTERFERON RESPONSIVE LYSOSOMAL THIOL (GILT) REDUCTASE FAMILY PROTEIN-RELATED (CHROMO DOMAIN CEC-LIKE PROTEIN (PTHR33349:SF18)

BNAA01G34580D PROTEIN (PTHR43096:SF42)

IRON REGULATORY PROTEIN 1A-RELATED (PTHR11670:SF54)  
MEMBRANE LIPOPROTEIN-RELATED (PTHR34964:SF3)  
ADAGIO PROTEIN 1 (PTHR46175:SF5)  
AUXIN RESPONSE FACTOR 12-RELATED (PTHR31384:SF120)

CYSTEINE/HISTIDINE-RICH C1 DOMAIN FAMILY PROTEIN-RELATED (PTHR32410:SF154)  
SELT-LIKE PROTEIN (PTHR13544:SF12)  
NUCLEIC ACID BINDING / ZINC ION BINDING PROTEIN-RELATED (PTHR31286:SF58)  
CYSTATIN/MONELLIN SUPERFAMILY PROTEIN (PTHR31228:SF26)  
F-BOX ASSOCIATED UBIQUITINATION EFFECTOR FAMILY PROTEIN (PTHR31790:SF176)  
NUCLEIC ACID BINDING / ZINC ION BINDING PROTEIN-RELATED (PTHR31286:SF58)  
CDPK-RELATED KINASE 6 (PTHR24349:SF389)  
OS05G0411600 PROTEIN (PTHR15672:SF15)  
BRCT DOMAIN DNA REPAIR PROTEIN-RELATED (PTHR47576:SF2)  
ATR INTERACTING PROTEIN (PTHR35761:SF1)  
PREPROTEIN TRANSLOCASE SUBUNIT SCY2, CHLOROPLASTIC (PTHR10906:SF2)  
DEFENSIN-LIKE PROTEIN 226-RELATED (PTHR34450:SF4)

DEAD-BOX ATP-DEPENDENT RNA HELICASE 33-RELATED (PTHR24031:SF324)  
KATANIN P80 WD40 REPEAT-CONTAINING SUBUNIT B1 HOMOLOG (PTHR19845:SF15)  
THREONYL AND ALANYL TRNA SYNTHETASE SECOND ADDITIONAL DOMAIN-CONTAINING PROTEIN (PTHEUKARYOTIC TRANSLATION INITIATION FACTOR 4B1 (PTHR32091:SF20)  
HEAVY METAL TRANSPORT/DETOXIFICATION SUPERFAMILY PROTEIN (PTHR46119:SF11)  
PROTEIN PLANT CADMIUM RESISTANCE 6 (PTHR15907:SF162)  
GLUTAMYL-TRNA(GLN) AMIDOTRANSFERASE SUBUNIT B, MITOCHONDRIAL (PTHR11659:SF0)  
PROLINE IMINOPEPTIDASE (PTHR43722:SF1)  
GIBBERELLIN 20-OXIDASE-LIKE PROTEIN (PTHR47990:SF9)

ATP-DEPENDENT CASEINOLYTIC PROTEASE/CROTONASE FAMILY PROTEIN (PTHR36368:SF1)

DEFENSIN-LIKE PROTEIN 229-RELATED (PTHR34450:SF5)

OS05G0393800 PROTEIN (PTHR13018:SF96)

PROTEIN TRANSPORT PROTEIN SEC13 HOMOLOG A (PTHR11024:SF12)

DES-1 PROTEIN (PTHR12879:SF8)

SYNTAXIN-122 (PTHR19957:SF269)

NUCLEIC ACID BINDING / ZINC ION BINDING PROTEIN-RELATED (PTHR31286:SF58)

WRKY TRANSCRIPTION FACTOR 74-RELATED (PTHR31282:SF141)

CYTOCHROME P450 71B23 (PTHR47956:SF15)

BNAC03G77960D PROTEIN (PTHR32212:SF294)

BIDIRECTIONAL SUGAR TRANSPORTER SWEET6-RELATED (PTHR10791:SF130)

CLASSICAL ARABINOGLACTAN PROTEIN 10-RELATED (PTHR36321:SF3)

CHP-RICH ZINC FINGER PROTEIN-RELATED (PTHR32410:SF153)

UDP-GLYCOSYLTRANSFERASE 84A3-RELATED (PTHR11926:SF1299)

CYSTEINE-RICH RECEPTOR-LIKE PROTEIN KINASE 36 (PTHR27002:SF389)

DNA MISMATCH REPAIR PROTEIN MLH1 (PTHR10073:SF12)

L-GULONOLACTONE OXIDASE (PTHR43762:SF1)

BNAC03G59090D PROTEIN (PTHR31681:SF32)

SPINDLE AND KINETOCHORE-ASSOCIATED PROTEIN 2 (PTHR32017:SF3)

GLUTATHIONE S-TRANSFERASE F14 (PTHR43900:SF43)

NUCLEIC ACID BINDING / ZINC ION BINDING PROTEIN-RELATED (PTHR31286:SF58)

PHD FINGER PROTEIN MALE MEIOCYTE DEATH 1-RELATED (PTHR46201:SF9)

ATP SYNTHASE SUBUNIT 9, MITOCHONDRIAL (PTHR10031:SF38)

ZGC:66475 (PTHR10211:SF0)

TRANSCRIPTION REPRESSOR-RELATED (PTHR33057:SF114)

WRKY TRANSCRIPTION FACTOR 41-RELATED (PTHR32096:SF62)

BNAC01G22540D PROTEIN (PTHR32212:SF319)

PROTEIN TORNADO 2 (PTHR32191:SF14)

KINASE SUPERFAMILY WITH OCTICOSAPEPTIDE/PHOX/BEM1P DOMAIN-CONTAINING PROTEIN (PTHR232

CHLOROPHYLL(IDE) B REDUCTASE NYC1, CHLOROPLASTIC-RELATED (PTHR24314:SF21)

CALCIUM-DEPENDENT PHOSPHOTRIESTERASE SUPERFAMILY PROTEIN-RELATED (PTHR31460:SF0)

EMB

60S RIBOSOMAL PROTEIN L2, MITOCHONDRIAL-RELATED (PTHR13691:SF44)

CYSTEINE-RICH RECEPTOR-LIKE PROTEIN KINASE 37 (PTHR27002:SF528)

FLAVONOL 3-O-GLUCOSYLTRANSFERASE UGT76E12-RELATED (PTHR11926:SF1226)

GLUTAMATE-1-SEMIALDEHYDE 2,1-AMINOMUTASE 1, CHLOROPLASTIC-RELATED (PTHR43713:SF3)



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SUBFAMILY NOT NAMED (PTHR31790:SF358)  
30S RIBOSOMAL PROTEIN S1, CHLOROPLASTIC (PTHR10724:SF7)  
PROLYL 4-HYDROXYLASE 3-RELATED (PTHR10869:SF192)  
CHLOROPLAST NUCLEOID DNA-BINDING PROTEIN-LIKE (PTHR47967:SF47)  
OS01G0332900 PROTEIN (PTHR37195:SF2)  
RBR-TYPE E3 UBIQUITIN TRANSFERASE (PTHR11685:SF371)

ALPHA/BETA-HYDROLASES SUPERFAMILY PROTEIN (PTHR45763:SF8)  
SHAGGY-RELATED PROTEIN KINASE THETA (PTHR24057:SF60)  
PENTATRICOPEPTIDE (PPR) REPEAT PROTEIN (PTHR47928:SF64)

PROTEIN, PUTATIVE-RELATED (PTHR31769:SF14)  
CHLORIDE CHANNEL PROTEIN CLC-D (PTHR11689:SF143)  
BIFUNCTIONAL INHIBITOR/LIPID-TRANSFER PROTEIN/SEED STORAGE 2S ALBUMIN SUPERFAMILY PROT  
JACALIN-RELATED LECTIN 34-RELATED (PTHR47293:SF7)

RINT1-LIKE PROTEIN MAG2 (PTHR13520:SF1)  
PYRIDOXAL 5'-PHOSPHATE SYNTHASE PDX1-LIKE 4-RELATED (PTHR31829:SF6)

DIHYDROLIPOYL DEHYDROGENASE 1, CHLOROPLASTIC (PTHR22912:SF199)

GROWTH-REGULATING FACTOR 3 (PTHR31602:SF63)  
BERBERINE BRIDGE ENZYME-LIKE 13 (PTHR32448:SF135)  
PROTEIN AIG2 B (PTHR31544:SF8)  
EXOSOME COMPONENT 10 (PTHR12124:SF47)  
TRANSMEMBRANE PROTEIN (PTHR35289:SF1)  
PROTEIN SPEAR1 (PTHR33388:SF18)

G2/MITOTIC-SPECIFIC CYCLIN-B (PTHR10177:SF347)  
GLUTATHIONE REDUCTASE, CHLOROPLASTIC (PTHR48105:SF24)  
CHLORIDE TRANSPORT PROTEIN 6 (PTHR11689:SF92)  
RIBOSOME MATURATION PROTEIN SBDS (PTHR10927:SF1)  
CYSTATIN/MONELLIN SUPERFAMILY PROTEIN (PTHR31228:SF10)

PROTEIN MICROTUBULE BINDING PROTEIN 2C (PTHR35502:SF2)

PROTEIN MALVOLIO (PTHR11706:SF8)  
EXTENSIN-LIKE PROTEIN-RELATED (PTHR36586:SF19)  
ALPHA/BETA-HYDROLASES SUPERFAMILY PROTEIN (PTHR46623:SF6)  
UBIQUITIN DOMAIN-CONTAINING PROTEIN 7SL RNA1-RELATED (PTHR10621:SF38)

VACUOLAR IRON TRANSPORTER HOMOLOG 1-RELATED (PTHR31851:SF42)  
PROTEIN ROOT UVB SENSITIVE 4 (PTHR12770:SF29)  
PROTEIN PHOSPHATASE 2C 10-RELATED (PTHR13832:SF723)  
PROTEIN REVERSION-TO-ETHYLENE SENSITIVITY1 (PTHR20921:SF7)

ASPARTIC/GLUTAMIC ACID-RICH PROTEIN (PTHR33621:SF2)  
PYROPHOSPHATE--FRUCTOSE 6-PHOSPHATE 1-PHOSPHOTRANSFERASE SUBUNIT BETA 2 (PTHR43650)  
UBIQUITIN DOMAIN-CONTAINING PROTEIN 7SL RNA1-RELATED (PTHR10621:SF38)  
CBBY-LIKE PROTEIN (PTHR42896:SF2)

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AGMATINE COUMAROYLTRANSFERASE-RELATED (PTHR31625:SF36)  
BAHD ACYLTRANSFERASE BIA1 (PTHR31623:SF47)  
WRKY TRANSCRIPTION FACTOR 63-RELATED (PTHR32096:SF87)  
BAG FAMILY MOLECULAR CHAPERONE REGULATOR 1 (PTHR12329:SF11)

POLLEN OLE E 1 ALLERGEN AND EXTENSIN FAMILY PROTEIN (PTHR34458:SF11)  
PARAFIBROMIN (PTHR12466:SF8)  
OS07G0633600 PROTEIN (PTHR31469:SF4)  
DEFENSIN-LIKE PROTEIN 1 (PTHR33147:SF72)  
ARABINOSYLTRANSFERASE XEG113 (PTHR46936:SF1)  
CYTOCHROME P450 FAMILY PROTEIN-RELATED (PTHR24286:SF230)

PROTEIN BOLA4, CHLOROPLASTIC/MITOCHONDRIAL (PTHR46230:SF4)  
DNA-BINDING PROTEIN S1FA1-RELATED (PTHR35298:SF9)  
EMB  
PECTINESTERASE INHIBITOR 3 (PTHR31080:SF110)  
F28N24.3 PROTEIN (PTHR31161:SF7)  
UDP-GLYCOSYLTRANSFERASE 71B5 (PTHR48049:SF61)  
HSP40/DNAJ PEPTIDE-BINDING PROTEIN (PTHR24078:SF545)  
FI01119P (PTHR24396:SF19)  
FORMIN-LIKE PROTEIN 1 (PTHR23213:SF276)  
BETA-GALACTOSIDASE 12 (PTHR23421:SF63)

ACYL PROTEIN THIOESTERASE FAMILY (PTHR10655:SF17)  
DPH3 HOMOLOG (PTHR21454:SF2)

E3 UBIQUITIN-PROTEIN LIGASE BOI (PTHR42647:SF35)  
STAPHYLOCOCCAL NUCLEASE DOMAIN-CONTAINING PROTEIN 1 (PTHR12302:SF2)  
PECTINESTERASE INHIBITOR 10 (PTHR31080:SF118)  
UDP-GLYCOSYLTRANSFERASE SUPERFAMILY PROTEIN-RELATED (PTHR11926:SF913)  
PROTEIN TIFY 3A-RELATED (PTHR33077:SF61)  
NUCLEIC ACID BINDING / ZINC ION BINDING PROTEIN-RELATED (PTHR31286:SF58)  
CCR4-NOT TRANSCRIPTION COMPLEX SUBUNIT 10 (PTHR12979:SF5)  
PURPLE ACID PHOSPHATASE 8 (PTHR10161:SF49)  
AP-1 COMPLEX SUBUNIT SIGMA-2 (PTHR11753:SF49)  
SERINE/THREONINE-PROTEIN PHOSPHATASE-RELATED (PTHR11668:SF300)  
CHAPERONE PROTEIN CLPC1, CHLOROPLASTIC-RELATED (PTHR43572:SF8)  
PHOTOSYSTEM I CHLOROPHYLL A/B-BINDING PROTEIN 3-1, CHLOROPLASTIC (PTHR21649:SF14)  
3-KETOACYL-COA SYNTHASE 13-RELATED (PTHR31561:SF76)  
MEDIATOR OF RNA POLYMERASE II TRANSCRIPTION SUBUNIT 8 (PTHR35552:SF1)  
PYRIDOXAL 5'-PHOSPHATE SYNTHASE SUBUNIT PDX1.1 (PTHR31829:SF4)  
UDP-3-O-ACYL-N-ACETYLGLUCOSAMINE DEACETYLASE 1, MITOCHONDRIAL-RELATED (PTHR33694:SF1)  
CYSTEINE PROTEINASES SUPERFAMILY PROTEIN-RELATED (PTHR31470:SF44)

PROTEIN LONG AFTER FAR-RED 3 (PTHR22642:SF2)  
BNAANG08770D PROTEIN (PTHR33976:SF9)  
ADENOSYLMETHIONINE-8-AMINO-7-OXONONANOATE AMINOTRANSFERASE (PTHR42684:SF3)  
LIPASE-LIKE PAD4 (PTHR47413:SF2)  
PHOSPHATIDYLINOSITOL GLYCAN ANCHOR BIOSYNTHESIS CLASS U PROTEIN (PTHR13121:SF0)

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TRANSMEMBRANE PROTEIN 147 (PTHR12869:SF0)  
EXPRESSED PROTEIN (PTHR43220:SF3)  
DEFENSIN-LIKE PROTEIN 2-RELATED (PTHR33147:SF78)  
FUCOSYLTRANSFERASE 10-RELATED (PTHR31889:SF45)  
SUBFAMILY NOT NAMED (PTHR31509:SF76)  
PROTEIN TOC75-3, CHLOROPLASTIC-RELATED (PTHR12815:SF42)  
NEUROFILAMENT HEAVY PROTEIN (PTHR37241:SF1)  
BASIC-LEUCINE ZIPPER TRANSCRIPTION FACTOR F-RELATED (PTHR47416:SF3)  
STRUCTURAL MAINTENANCE OF CHROMOSOMES PROTEIN (PTHR18937:SF12)  
RAN-BINDING PROTEIN M HOMOLOG (PTHR12864:SF49)  
PROTEIN YIPF (PTHR12822:SF2)  
RIBOSOMAL LYSINE N-METHYLTRANSFERASE 3 (PTHR13271:SF34)  
ATP-DEPENDENT 6-PHOSPHOFRUCTOKINASE 2 (PTHR45770:SF9)  
PERSULFIDE DIOXYGENASE ETHE1, MITOCHONDRIAL (PTHR43084:SF1)  
DISEASE RESISTANCE PROTEIN RFL1-RELATED (PTHR23155:SF896)  
PYRUVATE DECARBOXYLASE 3-RELATED (PTHR43452:SF18)

SINGLE-STRANDED DNA-BINDING PROTEIN, MITOCHONDRIAL (PTHR10302:SF13)

THIOREDOXIN H5 (PTHR10438:SF400)  
BNAA09G26720D PROTEIN (PTHR33083:SF72)

26S PROTEASOME NON-ATPASE REGULATORY SUBUNIT 3 (PTHR10758:SF2)

SODIUM/HYDROGEN EXCHANGER 1 (PTHR10110:SF163)  
F13O11.17 PROTEIN (PTHR33527:SF18)  
AUXIN-RESPONSIVE PROTEIN SAUR61-RELATED (PTHR31175:SF43)  
SPINDLE AND KINETOCHORE-ASSOCIATED PROTEIN 1 (PTHR28573:SF1)  
BURP DOMAIN PROTEIN RD22 (PTHR31236:SF2)  
CONDENSIN COMPLEX SUBUNIT 3 (PTHR14418:SF5)  
UDP-GLYCOSYLTRANSFERASE 91A1 (PTHR48043:SF38)  
CHITINASE-LIKE PROTEIN 2 (PTHR22595:SF96)  
BNAANNG08770D PROTEIN (PTHR33976:SF9)  
OS06G0652100 PROTEIN (PTHR31373:SF17)  
BNAC05G35080D PROTEIN (PTHR32153:SF12)  
EXTENSIN-2-RELATED (PTHR36586:SF16)  
DVL11-RELATED (PTHR33102:SF37)  
GLUTAMATE RECEPTOR 3.1 (PTHR18966:SF502)  
ALANINE--TRNA LIGASE, CYTOPLASMIC (PTHR11777:SF34)

LEUCINE-RICH REPEAT (LRR) FAMILY PROTEIN (PTHR27004:SF335)

MYOSIN-4 PROTEIN (DUF641)-RELATED (PTHR31161:SF2)  
EXCITATORY AMINO ACID TRANSPORTER (PTHR36052:SF1)

BNAANNG18740D PROTEIN (PTHR23070:SF111)  
PROTEIN ADMETOS (PTHR45496:SF13)  
PROTEIN NUCLEAR FUSION DEFECTIVE 4 (PTHR21576:SF29)  
CYSTEINE-RICH REPEAT SECRETORY PROTEIN 26-RELATED (PTHR32411:SF50)

E3 UBIQUITIN-PROTEIN LIGASE BAH1 (PTHR46764:SF1)

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CYTOCHROME B (PTHR19271:SF16)  
1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE-LIKE PROTEIN 1 (PTHR43795:SF40)  
S-ADENOSYL-L-METHIONINE-DEPENDENT METHYLTRANSFERASES SUPERFAMILY PROTEIN (PTHR31009)  
BNAA10G09820D PROTEIN (PTHR36075:SF1)  
BNACNNG04280D PROTEIN (PTHR31099:SF21)

GLYCOSIDE HYDROLASE FAMILY 28 PROTEIN-RELATED (PTHR31375:SF10)  
RAPID ALKALINIZATION FACTOR 23 (PTHR33136:SF62)  
PROTEIN, PUTATIVE (DUF1216)-RELATED (PTHR31607:SF19)  
F20P5.24 PROTEIN-RELATED (PTHR31125:SF7)  
ALPHA/BETA-HYDROLASES SUPERFAMILY PROTEIN (PTHR45763:SF39)  
SH3 DOMAIN-CONTAINING PROTEIN (PTHR48151:SF1)  
MYB/SANT-LIKE DNA-BINDING DOMAIN PROTEIN (PTHR47584:SF14)  
NAC DOMAIN-CONTAINING PROTEIN 100 (PTHR31744:SF104)  
PLANT SELF-INCOMPATIBILITY PROTEIN S1 FAMILY-RELATED (PTHR31232:SF89)  
SOMATIC EMBRYOGENESIS RECEPTOR KINASE 4-RELATED (PTHR47988:SF38)

ADAGIO PROTEIN 2 (PTHR46175:SF6)  
SOLUTE CARRIER FAMILY 15 MEMBER 4 (PTHR11654:SF509)  
26S PROTEASOME NON-ATPASE REGULATORY SUBUNIT 13 (PTHR10539:SF0)  
RNA-DEPENDENT RNA POLYMERASE FAMILY (PTHR23079:SF1)  
C2 DOMAIN-CONTAINING PROTEIN-LIKE (PTHR47042:SF4)  
MONOGALACTOSYLDIACYLGLYCEROL SYNTHASE 3, CHLOROPLASTIC (PTHR43025:SF6)  
F6A14.12 PROTEIN-RELATED (PTHR15710:SF120)  
JACALIN-RELATED LECTIN 13-RELATED (PTHR47293:SF11)  
BEL1-LIKE HOMEODOMAIN PROTEIN 9 (PTHR11850:SF82)  
BIFUNCTIONAL INHIBITOR/LIPID-TRANSFER PROTEIN/SEED STORAGE 2S ALBUMIN SUPERFAMILY PROTEIN  
SIGMA NON-OPIOID INTRACELLULAR RECEPTOR 1 (PTHR10868:SF1)  
PROTEIN PHOSPHATASE 1K, MITOCHONDRIAL (PTHR47992:SF136)  
PROTEIN COFACTOR ASSEMBLY OF COMPLEX C SUBUNIT B CCB3, CHLOROPLASTIC (PTHR33219:SF11)  
ANTIGENIC HEAT-STABLE PROTEIN (PTHR34356:SF1)

NON-LYSOSOMAL GLUCOSYLCERAMIDASE (PTHR12654:SF29)  
AUXIN-RESPONSIVE GH3 FAMILY PROTEIN-RELATED (PTHR31901:SF51)  
F-BOX ASSOCIATED UBIQUITINATION EFFECTOR FAMILY PROTEIN-RELATED (PTHR31714:SF10)  
CALCIUM-TRANSPORTING ATPASE 4, PLASMA MEMBRANE-TYPE (PTHR24093:SF438)  
EXTENSIN-LIKE PROTEIN-RELATED (PTHR36586:SF19)  
60S ACIDIC RIBOSOMAL PROTEIN P2-3-RELATED (PTHR21141:SF93)  
GLUCOSIDASE-LIKE PROTEIN (PTHR32227:SF359)  
ANKYRIN REPEAT FAMILY PROTEIN (PTHR24177:SF286)  
3-KETOACYL-COA SYNTHASE 21-RELATED (PTHR31561:SF6)  
BACTERIAL HEMOLYSIN-LIKE PROTEIN (PTHR32319:SF0)  
MYOSIN-4 PROTEIN (DUF641)-RELATED (PTHR31161:SF2)  
PREFOLDIN SUBUNIT 1 (PTHR20903:SF0)  
MAGNESIUM-CHELATASE SUBUNIT CHLI-2, CHLOROPLASTIC (PTHR32039:SF9)

F12P19.17 PROTEIN-RELATED (PTHR31861:SF16)  
F-BOX ASSOCIATED UBIQUITINATION EFFECTOR FAMILY PROTEIN (PTHR31945:SF92)  
UBIQUITIN-LIKE DOMAIN-CONTAINING CTD PHOSPHATASE 1 (PTHR32054:SF0)  
PROTEIN SET DOMAIN GROUP 41 (PTHR47780:SF1)

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STROMAL CELL-DERIVED FACTOR 2-LIKE PROTEIN (PTHR46809:SF2)

ACYL-COA N-ACYLTRANSFERASES (NAT) SUPERFAMILY PROTEIN (PTHR46067:SF17)  
TRANSCRIPTION FACTOR MYBS1 (PTHR44191:SF2)  
BNAA04G14280D PROTEIN (PTHR22166:SF33)  
CHP-RICH ZINC FINGER PROTEIN-RELATED (PTHR32410:SF153)  
HIT ZINC FINGER AND PAPA-1-LIKE DOMAIN-CONTAINING PROTEIN (PTHR21561:SF14)  
40S RIBOSOMAL PROTEIN S24 (PTHR10496:SF0)  
GB

E3 UBIQUITIN-PROTEIN LIGASE RHY1A-RELATED (PTHR45931:SF10)

ZINC FINGER CCCH DOMAIN-CONTAINING PROTEIN 19 (PTHR13115:SF14)  
PROTEIN RALF-LIKE 10-RELATED (PTHR34270:SF5)  
F-BOX ASSOCIATED UBIQUITINATION EFFECTOR FAMILY PROTEIN (PTHR47993:SF37)  
OS05G0355200 PROTEIN (PTHR47942:SF48)  
HISTONE H2A.8 (PTHR23430:SF259)  
ECHINUS SPLICE FORM 3 (PTHR22975:SF9)

CELLULOSE SYNTHASE-LIKE PROTEIN B1-RELATED (PTHR13301:SF53)  
EXPRESSED PROTEIN (PTHR31521:SF2)  
PROTEIN KINESIN LIGHT CHAIN-RELATED 1 (PTHR46284:SF2)  
E3 UBIQUITIN-PROTEIN LIGASE RNF165 (PTHR22937:SF65)  
F-BOX FAMILY PROTEIN-RELATED (PTHR33784:SF25)  
ENDONUCLEASE/GLYCOSYL HYDROLASE-RELATED (PTHR14379:SF19)  
ANTHOCYANIN ACYLTRANSFERASE-LIKE PROTEIN (PTHR31625:SF45)  
RHOMBOID-LIKE PROTEIN 7 (PTHR22936:SF94)  
OUTER ENVELOPE MEMBRANE PROTEIN 7 (PTHR33982:SF5)  
RNA-BINDING (RRM/RBD/RNP MOTIFS) FAMILY PROTEIN (PTHR11176:SF27)  
GB  
BNAA09G03860D PROTEIN (PTHR35759:SF1)  
MITOCHONDRIAL RIBOSOMAL PROTEIN, SMALL (PTHR11652:SF1)

BETA-D-XYLOSIDASE 3 (PTHR42721:SF20)  
O-ACYLTRANSFERASE (WSD1-LIKE) FAMILY PROTEIN (PTHR31650:SF46)  
UBIQUITIN SYSTEM COMPONENT CUE PROTEIN (PTHR31245:SF1)  
POLYADENYLATION AND CLEAVAGE FACTOR HOMOLOG 1-RELATED (PTHR15921:SF11)  
BNAC05G15000D PROTEIN (PTHR43003:SF7)  
CALMODULIN-BINDING TRANSCRIPTION ACTIVATOR 6 (PTHR23335:SF3)

ETHYLENE-RESPONSIVE TRANSCRIPTION FACTOR RAP2-1-RELATED (PTHR31729:SF2)  
DISEASE RESISTANCE PROTEIN RPP2B (PTHR11017:SF293)  
PROTEIN SINE2 (PTHR12794:SF4)  
RHODANESE-LIKE DOMAIN-CONTAINING PROTEIN 4A, CHLOROPLASTIC (PTHR47377:SF3)  
LACCASE-10 (PTHR11709:SF289)

BERBERINE BRIDGE ENZYME-LIKE 26 (PTHR32448:SF35)  
D-CYSTEINE DESULFHYDRASE 2, MITOCHONDRIAL (PTHR43780:SF7)  
OXYGEN-EVOLVING ENHANCER PROTEIN 3-2, CHLOROPLASTIC (PTHR33399:SF7)  
BNACNNG76600D PROTEIN (PTHR33127:SF48)

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AQUAPORIN NIP4-2-RELATED (PTHR45724:SF29)  
UBIQUITIN-LIKE PROTEASE 4 (PTHR46915:SF2)

GLUTAMATE CARBOXYPEPTIDASE 2 HOMOLOG (PTHR10404:SF46)  
DOWNREGULATED IN DIF1 18-RELATED (PTHR31207:SF23)

GB

PURINE PERMEASE 12-RELATED (PTHR31376:SF58)  
IMPORTIN SUBUNIT ALPHA-3 (PTHR23316:SF69)  
WAT1-RELATED PROTEIN (PTHR31218:SF15)  
RE07960P (PTHR23402:SF1)  
PROTEIN KINASE SUPERFAMILY PROTEIN (PTHR10566:SF123)

NICOTINAMIDASE 1 (PTHR47297:SF2)  
BNACNNG04280D PROTEIN (PTHR31099:SF21)  
PROLYL 4-HYDROXYLASE 5 (PTHR10869:SF193)  
TRAF FAMILY PROTEIN-RELATED (PTHR46162:SF5)  
TRYPTOPHAN AMINOTRANSFERASE-RELATED PROTEIN 1 (PTHR43795:SF52)

PLANT INTRACELLULAR RAS-GROUP-RELATED LRR PROTEIN 2 (PTHR45752:SF61)  
EXPANSIN-B5 (PTHR31692:SF77)  
LATE EMBRYOGENESIS ABUNDANT PROTEIN, GROUP 2 (PTHR31852:SF223)  
KINESIN-LIKE PROTEIN KIN-14C-RELATED (PTHR24115:SF917)  
BNAC03G75280D PROTEIN (PTHR33595:SF13)

TRANSMEMBRANE PROTEIN (PTHR34656:SF2)  
PENTATRICOPEPTIDE REPEAT-CONTAINING PROTEIN (PTHR47942:SF47)  
SERINE/THREONINE-PROTEIN KINASE-LIKE PROTEIN CCR2 (PTHR47989:SF18)  
PATELLIN-2 (PTHR45932:SF21)  
PUMILIO HOMOLOG 14-RELATED (PTHR12537:SF159)  
CHP-RICH ZINC FINGER PROTEIN-LIKE-RELATED (PTHR32410:SF162)  
ZINC FINGER PROTEIN JACKDAW (PTHR10593:SF128)

NADPH-DEPENDENT ALDEHYDE REDUCTASE-LIKE PROTEIN, CHLOROPLASTIC (PTHR48107:SF7)  
NAC DOMAIN-CONTAINING PROTEIN 3-RELATED (PTHR31989:SF292)  
EXTENSIN-2-RELATED (PTHR36586:SF16)  
O-FUCOSYLTRANSFERASE 5 (PTHR13398:SF6)

PPR CONTAINING PLANT-LIKE PROTEIN (PTHR47942:SF14)  
RUBISCO ACCUMULATION FACTOR 1.1, CHLOROPLASTIC (PTHR35299:SF4)  
BORON TRANSPORTER 6-RELATED (PTHR11453:SF98)  
LRR RECEPTOR-LIKE SERINE/THREONINE-KINASE-RELATED (PTHR45631:SF45)  
CCR4-ASSOCIATED FACTOR 1 HOMOLOG 3-RELATED (PTHR10797:SF57)  
CALCIUM-BINDING EF-HAND FAMILY PROTEIN-RELATED (PTHR23354:SF95)  
EQUILIBRATIVE NUCLEOTIDE TRANSPORTER 4 (PTHR10332:SF67)  
MYB DOMAIN PROTEIN 110 (PTHR45614:SF136)  
LACTOYLGLUTATHIONE LYASE (PTHR10374:SF30)  
METHYL-CPG-BINDING DOMAIN-CONTAINING PROTEIN 5 (PTHR12396:SF40)

RING/U-BOX SUPERFAMILY PROTEIN (PTHR22765:SF324)  
PROTEIN LIN-54 HOMOLOG (PTHR12446:SF34)

3-KETOACYL-COA SYNTHASE 11 (PTHR31561:SF103)

KINESIN-LIKE PROTEIN KIN-4B (PTHR47969:SF3)

NUCLEIC ACID BINDING / ZINC ION BINDING PROTEIN-RELATED (PTHR31286:SF58)

PROTEIN DETOXIFICATION 7-RELATED (PTHR11206:SF414)

ETHYLENE-RESPONSIVE TRANSCRIPTION FACTOR 5 (PTHR31677:SF79)

HISTONE H4 (PTHR10484:SF183)

SPlicing FACTOR PWI DOMAIN-CONTAINING PROTEIN / RNA RECOGNITION MOTIF (RRM)-CONTAINING I

PLANT INVERTASE/PECTIN METHYLESTERASE INHIBITOR SUPERFAMILY PROTEIN (PTHR31080:SF97)

SNF1-RELATED PROTEIN KINASE CATALYTIC SUBUNIT ALPHA KIN11 (PTHR24343:SF438)

PURPLE ACID PHOSPHATASE 15 (PTHR22953:SF96)

UDP-3-O-ACYL-N-ACETYLGLUCOSAMINE DEACETYLASE 1, MITOCHONDRIAL-RELATED (PTHR33694:SF1)

EXPRESSED PROTEIN-RELATED (PTHR15672:SF26)

PROTEIN FIZZY-RELATED 1 (PTHR19918:SF40)

40S RIBOSOMAL PROTEIN S23-1-RELATED (PTHR11652:SF40)

CYCLIN-DEPENDENT KINASE 8 (PTHR24056:SF92)

CYSTEINE-RICH RECEPTOR-LIKE PROTEIN KINASE 1 (PTHR47973:SF6)

DISEASE RESISTANCE PROTEIN ADR1 (PTHR11017:SF296)

BNAA09G44410D PROTEIN (PTHR21319:SF47)

CHP-RICH ZINC FINGER PROTEIN-LIKE (PTHR32410:SF155)

ACYL-COA-BINDING DOMAIN-CONTAINING PROTEIN 4 (PTHR46093:SF6)

GLUTATHIONE S-TRANSFERASE U22 (PTHR11260:SF584)

CYSTEINE/HISTIDINE-RICH C1 DOMAIN FAMILY PROTEIN (PTHR32410:SF163)

SIT4 PHOSPHATASE-ASSOCIATED FAMILY PROTEIN (PTHR12634:SF22)

AUXIN RESPONSE FACTOR 12-RELATED (PTHR31384:SF120)

ADC SYNTHASE SUPERFAMILY PROTEIN-RELATED (PTHR11236:SF33)

TETRATRICOPEPTIDE REPEAT (TPR)-LIKE SUPERFAMILY PROTEIN (PTHR47938:SF13)

NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 3 (PTHR11058:SF17)

60S RIBOSOMAL PROTEIN L30-1-RELATED (PTHR11449:SF25)

COFACTOR-INDEPENDENT PHOSPHOGLYCERATE MUTASE (PTHR31209:SF0)

GOT1/SFT2-LIKE VESICLE TRANSPORT PROTEIN FAMILY (PTHR21493:SF246)

RMLC-LIKE JELLY ROLL PROTEIN-RELATED (PTHR33271:SF1)

ALPHA/BETA-HYDROLASES SUPERFAMILY PROTEIN (PTHR12277:SF75)

TRANSMEMBRANE PROTEIN 116 (PTHR23112:SF0)

MITOCHONDRIAL RIBOSOMAL PROTEIN, SMALL (PTHR11652:SF1)

ZINC FINGER PROTEIN-LIKE 1 (PTHR12981:SF0)

PEPTIDYL-PROLYL CIS-TRANS ISOMERASE-LIKE 4 (PTHR45843:SF1)

PROLINE-RICH PROTEIN 2 (PTHR23201:SF79)

RING/U-BOX SUPERFAMILY PROTEIN (PTHR15860:SF19)

PROTEIN KINASE SUPERFAMILY PROTEIN (PTHR48011:SF51)

DNASE I-LIKE SUPERFAMILY PROTEIN (PTHR33710:SF20)

BIFUNCTIONAL INHIBITOR/LIPID-TRANSFER PROTEIN/SEED STORAGE 2S ALBUMIN SUPERFAMILY PROT

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ACYL-COA N-ACYLTRANSFERASES (NAT) SUPERFAMILY PROTEIN (PTHR46067:SF27)  
EUKARYOTIC TRANSLATION INITIATION FACTOR 3 SUBUNIT C-RELATED (PTHR13937:SF0)  
BNAC03G47610D PROTEIN (PTHR12280:SF38)  
F6A14.12 PROTEIN-RELATED (PTHR15710:SF120)  
MALATE DEHYDROGENASE, MITOCHONDRIAL (PTHR11540:SF16)  
F-BOX FAMILY PROTEIN-RELATED (PTHR33784:SF25)  
SUMO-ACTIVATING ENZYME SUBUNIT 2 (PTHR10953:SF5)  
PROTEIN HYPER-SENSITIVITY-RELATED 4 (PTHR23070:SF153)  
HOLLIDAY JUNCTION RESOLVASE MOC1, CHLOROPLASTIC-RELATED (PTHR36015:SF6)  
CELL WALL / VACUOLAR INHIBITOR OF FRUCTOSIDASE 1 (PTHR31080:SF18)  
E3 UBIQUITIN-PROTEIN LIGASE ARI2-RELATED (PTHR11685:SF241)  
CASP-LIKE PROTEIN 1C1 (PTHR11615:SF159)  
NUCLEOLAR GTP-BINDING PROTEIN 2 (PTHR11089:SF9)  
FOLATE-BIOPTERIN TRANSPORTER 1, CHLOROPLASTIC (PTHR31585:SF0)  
CYTOCHROME P450 714A1-RELATED (PTHR24282:SF36)  
SUCCINATE DEHYDROGENASE [UBIQUINONE] IRON-SULFUR SUBUNIT 3, MITOCHONDRIAL (PTHR11921:SF0)  
BIFUNCTIONAL INHIBITOR/LIPID-TRANSFER PROTEIN/SEED STORAGE 2S ALBUMIN SUPERFAMILY PROTEIN  
RIBONUCLEASE H2 SUBUNIT A (PTHR10954:SF7)  
OS05G0510400 PROTEIN (PTHR31215:SF2)  
MEIOSIS-SPECIFIC PROTEIN ASY2-RELATED (PTHR31099:SF18)  
GLYCOSYLTRANSFERASE-RELATED (PTHR48047:SF75)  
GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE 1, CHLOROPLASTIC (PTHR23429:SF13)  
CYSTEINE-RICH RECEPTOR-LIKE PROTEIN KINASE 41 (PTHR27002:SF796)

GOLGIN FAMILY A PROTEIN (PTHR47820:SF2)  
F-BOX ASSOCIATED UBIQUITINATION EFFECTOR FAMILY PROTEIN (PTHR47993:SF181)  
T2E6.7-RELATED (PTHR37194:SF2)  
VQ MOTIF-CONTAINING PROTEIN 5 (PTHR33783:SF5)  
PROTEIN MTO1 HOMOLOG, MITOCHONDRIAL (PTHR11806:SF0)  
METHYLTRANSFERASE PMT15-RELATED (PTHR10108:SF1059)  
PEROXIDASE 44-RELATED (PTHR31235:SF90)  
LOB DOMAIN-CONTAINING PROTEIN 5-RELATED (PTHR31301:SF19)  
HEAT SHOCK 70 KDA PROTEIN 8 (PTHR19375:SF101)  
CELL DIVISION CONTROL PROTEIN 6 HOMOLOG (PTHR10763:SF26)  
PLANT TRANSPOSASE (PTTA/EN/SPM FAMILY) (PTHR33144:SF22)  
BNAANNG19420D PROTEIN (PTHR31375:SF216)  
PSBP DOMAIN-CONTAINING PROTEIN 1, CHLOROPLASTIC (PTHR31407:SF15)  
PROTEIN KINASE SUPERFAMILY PROTEIN (PTHR47982:SF20)  
RNI-LIKE SUPERFAMILY PROTEIN (PTHR31293:SF18)  
PLANT SELF-INCOMPATIBILITY PROTEIN S1 FAMILY (PTHR31232:SF45)  
F13F21.11 PROTEIN (PTHR22844:SF339)  
F-BOX PROTEIN SKIP14-LIKE (PTHR13382:SF20)  
F-BOX ONLY PROTEIN 9-RELATED (PTHR47993:SF70)  
MEMBRANE RELATED PROTEIN-LIKE (PTHR19308:SF36)  
CYTOCHROME P450 71B11-RELATED (PTHR47956:SF96)  
GAMMA CARBONIC ANHYDRASE 2, MITOCHONDRIAL (PTHR13061:SF30)

BNAC08G44340D PROTEIN (PTHR31541:SF35)  
ALLYL ALCOHOL DEHYDROGENASE, NADP-DEPENDENT OXIDOREDUCTASE-LIKE PROTEIN-RELATED (PTHR10015:SF385)



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BERBERINE BRIDGE ENZYME-LIKE 27-RELATED (PTHR32448:SF70)  
PROLINE-RICH RECEPTOR-LIKE PROTEIN KINASE PERK8 (PTHR27001:SF489)  
NAC DOMAIN-CONTAINING PROTEIN 105 (PTHR31989:SF140)  
DEAD-BOX ATP-DEPENDENT RNA HELICASE 58, CHLOROPLASTIC (PTHR47958:SF95)  
PROLYL-TRNA SYNTHETASE ASSOCIATED DOMAIN-CONTAINING PROTEIN 1-RELATED (PTHR31423:SF3)

CATION/H(+) ANTIporter 18 (PTHR32468:SF34)  
CLAVATA3/ESR (CLE)-RELATED PROTEIN 11-RELATED (PTHR34359:SF10)  
ASCORBIC ACID MANNOSE PATHWAY REGULATOR-RELATED (PTHR47123:SF6)

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<b>PANTHER Protein Class</b>	<b>Species</b>
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
protein modifying enzyme(PC00260)	Arabidopsis thaliana
	Arabidopsis thaliana
ubiquitin-protein ligase(PC00234)	Arabidopsis thaliana
cysteine protease(PC00081)	Arabidopsis thaliana
protein phosphatase(PC00195)	Arabidopsis thaliana
reductase(PC00198)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
RNA binding protein(PC00031)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
non-receptor serine/threonine protein kinase(PC00167)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
transporter(PC00227)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
RNA binding protein(PC00031)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
ligase(PC00142)	Arabidopsis thaliana
serine protease(PC00203)	Arabidopsis thaliana
	Arabidopsis thaliana



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ribosomal protein(PC00202)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
ubiquitin-protein ligase(PC00234)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
non-receptor serine/threonine protein kinase(PC00167)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
EIN (PTHR33214:SF20)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
oxidoreductase(PC00176)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
kinase activator(PC00138)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
RNA binding protein(PC00031)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
primary active transporter(PC00068)	Arabidopsis thaliana
extracellular matrix structural protein(PC00103)	Arabidopsis thaliana
	Arabidopsis thaliana
damaged DNA-binding protein(PC00086)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
protein phosphatase(PC00195)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
carbohydrate kinase(PC00065)	Arabidopsis thaliana
damaged DNA-binding protein(PC00086)	Arabidopsis thaliana
phosphatase(PC00181)	Arabidopsis thaliana











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	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
metalloprotease(PC00153)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
AAF16529.1-RELATED (PTHR31710:SF38)		Arabidopsis thaliana
	Arabidopsis thaliana	
transporter(PC00227)	Arabidopsis thaliana	
	Arabidopsis thaliana	
cysteine protease(PC00081)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
transaminase(PC00216)	Arabidopsis thaliana	
	Arabidopsis thaliana	
scaffold/adaptor protein(PC00226)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
microtubule binding motor protein(PC00156)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
RNA binding protein(PC00031)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
extracellular matrix structural protein(PC00103)	Arabidopsis thaliana	
glycosyltransferase(PC00111)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
secondary carrier transporter(PC00258)	Arabidopsis thaliana	
	Arabidopsis thaliana	
mRNA polyadenylation factor(PC00146)	Arabidopsis thaliana	
	Arabidopsis thaliana	
transporter(PC00227)	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	
	Arabidopsis thaliana	

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	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
transporter(PC00227)	Arabidopsis thaliana
	Arabidopsis thaliana
histone(PC00118)	Arabidopsis thaliana
PROTEIN (PTHR47334:SF2)	Arabidopsis thaliana
	Arabidopsis thaliana
non-receptor serine/threonine protein kinase(PC00167)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
ubiquitin-protein ligase(PC00234)	Arabidopsis thaliana
ribosomal protein(PC00202)	Arabidopsis thaliana
non-receptor serine/threonine protein kinase(PC00167)	Arabidopsis thaliana
	Arabidopsis thaliana
ubiquitin-protein ligase(PC00234)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
phosphatase modulator(PC00184)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
oxidoreductase(PC00176)	Arabidopsis thaliana
ribosomal protein(PC00202)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
serine protease(PC00203)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
ribosomal protein(PC00202)	Arabidopsis thaliana
membrane traffic protein(PC00150)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
EIN (PTHR33044:SF180)	Arabidopsis thaliana

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	Arabidopsis thaliana
	Arabidopsis thaliana
translation initiation factor(PC00224)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
dehydrogenase(PC00092)	Arabidopsis thaliana
	Arabidopsis thaliana
ubiquitin-protein ligase(PC00234)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
ubiquitin-protein ligase(PC00234)	Arabidopsis thaliana
dehydrogenase(PC00092)	Arabidopsis thaliana
	Arabidopsis thaliana
oxygenase(PC00177)	Arabidopsis thaliana
dehydrogenase(PC00092)	Arabidopsis thaliana
EIN (PTHR33044:SF136)	Arabidopsis thaliana
endoribonuclease(PC00094)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
dehydrogenase(PC00092)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
methyltransferase(PC00155)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
replication origin binding protein(PC00199)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
ATP synthase(PC00002)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
microtubule binding motor protein(PC00156)	Arabidopsis thaliana
	Arabidopsis thaliana
	Arabidopsis thaliana
reductase(PC00198)	Arabidopsis thaliana
winged helix/forkhead transcription factor(PC00246)	Arabidopsis thaliana

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transporter(PC00227)

Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana  
Arabidopsis thaliana