

**Supplemental Table S2: List of genes in the candidate regions spanning the SNB resistance QTLs and their functional annotations.**

**GWAS analysis reveals distinct pathogenicity profiles of Australian *Parastagonospora nodorum* isolates and identification of marker-trait-associations to septoria nodorum blotch**

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**Table S2: List of genes in the candidate regions spanning the SNB resistance QTLs and their functional annotations.**

Chromosome	Most significant SNP	Gene Id	Transcript	Description	Interpro Description
1B	AX.94950274	TraesCS1B02G339800	TraesCS1B02G339800.1		IPR032675:Leucine-rich repeat domain superfamily
		TraesCS1B02G340000	TraesCS1B02G340000.1		IPR001002:Chitin-binding, type 1 IPR018371:Chitin-binding, type 1, conserved site
		TraesCS1B02G340200	TraesCS1B02G340200.1	Agglutinin isolectin 3 (WGA3) (Fragment)	IPR036861:Endochitinase-like superfamily
	AX.94694976	TraesCS1D02G009406	TraesCS1D02G009406.1	Powdery mildew resistance protein (Fragment)	IPR001002:Chitin-binding, type 1 IPR018371:Chitin-binding, type 1, conserved site
		TraesCS1D02G009443	TraesCS1D02G009443.1	Powdery mildew resistance protein PM3 variant	IPR036861:Endochitinase-like superfamily
		TraesCS1D02G009800	TraesCS1D02G009800.1	Protein DETOXIFICATION	IPR032675:Leucine-rich repeat domain superfamily
		TraesCS1D02G010000	TraesCS1D02G010000.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
		TraesCS1D02G010000	TraesCS1D02G010000.2		IPR002528:Multi antimicrobial extrusion protein
		TraesCS1D02G010100	TraesCS1D02G010100.1		IPR018865:Serine-threonine protein kinase 19
		TraesCS1D02G010800	TraesCS1D02G010800.1		IPR018865:Serine-threonine protein kinase 19
		TraesCS1D02G010900	TraesCS1D02G010900.1	Serine/threonine-protein kinase	IPR000719:Protein kinase domain IPR000742:EGF-like domain IPR001881:EGF-like calcium-binding domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR018097:EGF-like calcium-binding, conserved site IPR025287:Wall-associated receptor kinase, galacturonan-binding domain
		TraesCS1D02G011200	TraesCS1D02G011200.1		IPR001611:Leucine-rich repeat IPR013210:Leucine-rich repeat-containing N-terminal, plant-type
		TraesCS1D02G011400	TraesCS1D02G011400.1		IPR032675:Leucine-rich repeat domain superfamily
		TraesCS1D02G012200	TraesCS1D02G012200.1		IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site
		TraesCS1D02G012800	TraesCS1D02G012800.1		IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
		TraesCS1D02G012900	TraesCS1D02G012900.1	Serine/threonine-protein kinase	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site
				[Source:UniProtKB/TrEMBL;Accession:A0A1D5T4S3]	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
				[Source:UniProtKB/TrEMBL;Accession:A0A1D5T1A8]	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
		[Source:UniProtKB/TrEMBL;Accession:A0A1D5T2E8]	IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal		

		Tubulin-folding cofactor E [Source:Projected from Arabidopsis thaliana (AT1G71440) UniProtKB/Swiss- Prot;Acc:Q8GRL7]	IPR001611:Leucine-rich repeat domain superfamily IPR003591:Leucine-rich repeat, typical subtype IPR029071:Ubiquitin-like repeat domain superfamily IPR032675:Leucine-rich repeat domain superfamily
		Serine/threonine-protein kinase [Source:UniProtKB/TrEMBL;A cc:A0A1D5T2M5]	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase superfamily IPR036426:Bulb-type lectin domain superfamily
			IPR011009:Protein kinase-like domain superfamily
			IPR000719:Protein kinase domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
			IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
			IPR032675:Leucine-rich repeat domain superfamily
		Receptor-like kinase 2 [Source:UniProtKB/TrEMBL;A cc:D0QEJ4] Receptor-like kinase 2	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
			IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
			IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
			IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
		LRR14 [Source:UniProtKB/TrEMBL;A cc:Q9ATQ3] LRR14	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
			IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
			IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
			IPR001611:Leucine-rich repeat IPR032675:Leucine-rich repeat domain superfamily

1D

TraesCS1D02G016900	TraesCS1D02G016900.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
		Putative non-tir-NBS-LRR	
TraesCS1D02G016983	TraesCS1D02G016983.1	resistance gene analog (Fragment)	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
TraesCS1D02G017400	TraesCS1D02G017400.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS1D02G017600	TraesCS1D02G017600.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS1D02G017700	TraesCS1D02G017700.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS1D02G017800	TraesCS1D02G017800.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS1D02G017900	TraesCS1D02G017900.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS1D02G018000	TraesCS1D02G018000.2		IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR020635:Tyrosine-protein kinase, catalytic domain
TraesCS1D02G018000	TraesCS1D02G018000.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily
TraesCS1D02G018700	TraesCS1D02G018700.2		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal
TraesCS1D02G018700	TraesCS1D02G018700.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal
TraesCS1D02G018800	TraesCS1D02G018800.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS1D02G019400	TraesCS1D02G019400.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
TraesCS1D02G019600	TraesCS1D02G019600.1	Name: Lr10	IPR032675:Leucine-rich repeat domain superfamily
TraesCS1D02G019700	TraesCS1D02G019700.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS1D02G020400	TraesCS1D02G020400.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
TraesCS1D02G020619	TraesCS1D02G020619.1		IPR032675:Leucine-rich repeat domain superfamily
TraesCS1D02G021000	TraesCS1D02G021000.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS1D02G021200	TraesCS1D02G021200.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
TraesCS1D02G022600	TraesCS1D02G022600.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily

	TraesCS1D02G023000	TraesCS1D02G023000.1	IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR032675:Leucine-rich repeat domain superfamily
	TraesCS1D02G023100	TraesCS1D02G023100.1	IPR003591:Leucine-rich repeat, typical subtype IPR032675:Leucine-rich repeat domain superfamily
AX.95253275	TraesCS1D02G146700	TraesCS1D02G146700.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008266:Tyrosine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
1D	TraesCS1D02G146800	TraesCS1D02G146800.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008266:Tyrosine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
	TraesCS1D02G146900	TraesCS1D02G146900.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008266:Tyrosine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
	TraesCS1D02G149200	TraesCS1D02G149200.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
AX.94723571	TraesCS1D02G264600	TraesCS1D02G264600.1	IPR032675:Leucine-rich repeat domain superfamily
	TraesCS1D02G264800	TraesCS1D02G264800.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS1D02G265100	TraesCS1D02G265100.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS1D02G265200	TraesCS1D02G265200.2	IPR001611:Leucine-rich repeat IPR006553:Leucine-rich repeat, cysteine-containing subtype IPR032675:Leucine-rich repeat domain superfamily
1D	TraesCS1D02G265200	TraesCS1D02G265200.4	IPR011009:Protein kinase-like domain superfamily IPR015275:Actin-fragmin kinase, catalytic domain IPR035010:Dual specificity protein phosphatase PHS1 IPR036940:Phosphatidylinositol 3-/4-kinase, catalytic domain superfamily
	TraesCS1D02G265200	TraesCS1D02G265200.1	IPR011009:Protein kinase-like domain superfamily IPR015275:Actin-fragmin kinase, catalytic domain IPR035010:Dual specificity protein phosphatase PHS1 IPR036940:Phosphatidylinositol 3-/4-kinase, catalytic domain superfamily
	TraesCS1D02G265200	TraesCS1D02G265200.3	IPR029021:Protein-tyrosine phosphatase-like IPR035010:Dual specificity protein phosphatase PHS1 IPR036940:Phosphatidylinositol 3-/4-kinase, catalytic domain superfamily
	TraesCS1D02G267200	TraesCS1D02G267200.1	IPR011009:Protein kinase-like domain superfamily IPR015275:Actin-fragmin kinase, catalytic domain IPR035010:Dual specificity protein phosphatase PHS1 IPR036940:Phosphatidylinositol 3-/4-kinase, catalytic domain superfamily
	TraesCS1D02G268400	TraesCS1D02G268400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
			IPR032675:Leucine-rich repeat domain superfamily
			IPR001810:F-box domain IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily
			IPR036047:F-box-like domain superfamily

2A

AX.95632742	TraesCS2A02G418200	TraesCS2A02G418200.1	IPR000719:Protein kinase domain IPR006311:Twin-arginine translocation pathway, signal sequence IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021720:Malectin domain IPR032675:Leucine-rich repeat domain superfamily
	TraesCS2A02G418300	TraesCS2A02G418300.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021720:Malectin domain IPR032675:Leucine-rich repeat domain superfamily
	TraesCS2A02G418400	TraesCS2A02G418400.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021720:Malectin domain IPR032675:Leucine-rich repeat domain superfamily
	TraesCS2A02G421000	TraesCS2A02G421000.1	IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR036388:Winged helix-like DNA-binding domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS2A02G422300	TraesCS2A02G422300.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS2A02G423000	TraesCS2A02G423000.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS2A02G423800	TraesCS2A02G423800.1	IPR001611:Leucine-rich repeat IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
AX.95171319	TraesCS2A02G555900	TraesCS2A02G555900.2	IPR001810:F-box domain IPR006566:FBF domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS2A02G558000	TraesCS2A02G558000.1	WAMP-3.1, antimicrobial peptide [Source:UniProtKB/TrEMBL;A cc:H6S4F9] WAMP-3.1, antimicrobial peptide IPR001002:Chitin-binding, type 1 IPR036861:Endochitinase-like superfamily
	TraesCS2A02G558500	TraesCS2A02G558500.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS2A02G559000	TraesCS2A02G559000.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype
	TraesCS2A02G559400	TraesCS2A02G559400.1	IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
	TraesCS2A02G560600	TraesCS2A02G560600.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
	TraesCS2A02G560700	TraesCS2A02G560700.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
	TraesCS2A02G560700	TraesCS2A02G560700.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
	TraesCS2A02G560900	TraesCS2A02G560900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal

2A	TraesCS2A02G561100	TraesCS2A02G561100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
	TraesCS2A02G562200	TraesCS2A02G562200.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS2A02G562800	TraesCS2A02G562800.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR002902:Gnk2-homologous domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR038408:Gnk2-homologous domain superfamily
	TraesCS2A02G563200	TraesCS2A02G563200.1	IPR032675:Leucine-rich repeat domain superfamily
	TraesCS2A02G563200	TraesCS2A02G563200.2	IPR032675:Leucine-rich repeat domain superfamily
	TraesCS2A02G563400	TraesCS2A02G563400.2	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021094:NPR1/NIM1-like, C-terminal
	TraesCS2A02G563400	TraesCS2A02G563400.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021094:NPR1/NIM1-like, C-terminal
	TraesCS2B02G158700	TraesCS2B02G158700.1	IPR000719:Protein kinase domain IPR001220:Legume lectin domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013320:Concanavalin A-like lectin/glucanase domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS2B02G158800	TraesCS2B02G158800.1	IPR000719:Protein kinase domain IPR001220:Legume lectin domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013320:Concanavalin A-like lectin/glucanase domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS2B02G163000	TraesCS2B02G163000.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily
TraesCS2B02G163700	TraesCS2B02G163700.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily	
A.X.94774467	TraesCS2B02G220900	TraesCS2B02G220900.1	IPR000719:Protein kinase domain IPR001220:Legume lectin domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013320:Concanavalin A-like lectin/glucanase domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS2B02G221100	TraesCS2B02G221100.1	IPR000719:Protein kinase domain IPR001220:Legume lectin domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013320:Concanavalin A-like lectin/glucanase domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS2B02G221200	TraesCS2B02G221200.1	IPR000719:Protein kinase domain IPR001220:Legume lectin domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013320:Concanavalin A-like lectin/glucanase domain superfamily IPR017441:Protein kinase, ATP binding site IPR019825:Legume lectin, beta chain, Mn/Ca-binding site
2B	TraesCS2B02G222100	TraesCS2B02G222100.1	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily

2B

	TraesCS2B02G222800	TraesCS2B02G222800.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
	TraesCS2B02G222900	TraesCS2B02G222900.1	IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS2B02G223600	TraesCS2B02G223600.2	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
	TraesCS2B02G223600	TraesCS2B02G223600.1	IPR017441:Protein kinase, ATP binding site
	TraesCS2B02G225000	TraesCS2B02G225000.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
AX.95165387	TraesCS2B02G549700	TraesCS2B02G549700.1	IPR011009:Protein kinase-like domain superfamily
	TraesCS2B02G551900	TraesCS2B02G551900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
	TraesCS2B02G552500	TraesCS2B02G552500.1	IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS2B02G552500	TraesCS2B02G552500.2	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS2B02G552900	TraesCS2B02G552900.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS2B02G553000	TraesCS2B02G553000.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
	TraesCS2B02G553200	TraesCS2B02G553200.1	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS2B02G554700	TraesCS2B02G554700.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
	TraesCS2B02G555200	TraesCS2B02G555200.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
	TraesCS2B02G555200	TraesCS2B02G555200.2	IPR011009:Protein kinase-like domain superfamily IPR020635:Tyrosine-protein kinase, catalytic domain
	TraesCS2D02G561100	TraesCS2D02G561100.1	IPR001810:F-box domain IPR013187:F-box associated domain, type 3 IPR036047:F-box-like domain superfamily
AX.95133018	TraesCS2D02G561200	TraesCS2D02G561200.1	IPR007320:Programmed cell death protein 2, C-terminal
	TraesCS2D02G563800	TraesCS2D02G563800.1	IPR013187:F-box associated domain, type 3 IPR017451:F-box associated interaction domain
	TraesCS2D02G563900	TraesCS2D02G563900.1	IPR000719:Protein kinase domain IPR00858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site
			IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
			IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
			IPR017441:Protein kinase, ATP binding site
			IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
			IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001611:Leucine-rich repeat IPR008271:Serine/threonine-protein kinase, active site
			IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			IPR025875:Leucine rich repeat 4 IPR032675:Leucine-rich repeat domain superfamily
			IPR032675:Leucine-rich repeat domain superfamily
			IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily



2D

TraesCS2D02G564300	TraesCS2D02G564300.1	Protein kinase domain-containing protein	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS2D02G566800	TraesCS2D02G566800.1	Peroxidase [Source:UniProtKB/TrEMBL;Accession:A0A1D5UJX6] Peroxidase (EC 1.11.1.7)	IPR000823:Plant peroxidase IPR002016:Haem peroxidase IPR010255:Haem peroxidase superfamily IPR019793:Peroxidases haem-ligand binding site IPR019794:Peroxidase, active site IPR033905:Secretory peroxidase
TraesCS2D02G566900	TraesCS2D02G566900.1	Cytochrome c domain-containing protein	IPR002327:Cytochrome c, class IA/ IB IPR009056:Cytochrome c-like domain IPR036909:Cytochrome c-like domain superfamily
TraesCS2D02G567200	TraesCS2D02G567200.1	NB-ARC domain-containing protein	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G567300	TraesCS2D02G567300.1		IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G567400	TraesCS2D02G567400.1	NB-ARC domain-containing protein	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
TraesCS2D02G567500	TraesCS2D02G567500.1	Uncharacterized protein	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS2D02G567800	TraesCS2D02G567800.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G568700	TraesCS2D02G568700.1		IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G568800	TraesCS2D02G568800.1		IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G568900	TraesCS2D02G568900.1		IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G569100	TraesCS2D02G569100.1		IPR001611:Leucine-rich repeat IPR024788:Malectin-like domain IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G569400	TraesCS2D02G569400.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS2D02G570200	TraesCS2D02G570200.1		IPR036047:F-box-like domain superfamily IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype
TraesCS2D02G571100	TraesCS2D02G571100.1		IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
TraesCS2D02G571600	TraesCS2D02G571600.1	WAMP-1, antimicrobial peptide [Source:UniProtKB/TrEMBL;Accession:H6S4F8] WAMP-1, antimicrobial peptide	IPR001002:Chitin-binding, type 1 IPR036861:Endochitinase-like superfamily
TraesCS2D02G572000	TraesCS2D02G572000.2		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021094:NPR1/NIM1-like, C-terminal
TraesCS2D02G572000	TraesCS2D02G572000.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR021094:NPR1/NIM1-like, C-terminal

	TraesCS2D02G572600	TraesCS2D02G572600.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR002902:Gnk2-homologous domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR038408:Gnk2-homologous domain superfamily
A.X.94429024	TraesCS3A02G073700	TraesCS3A02G073700.1	IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS3A02G073800	TraesCS3A02G073800.1	IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS3A02G073900	TraesCS3A02G073900.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily
3A	TraesCS3A02G074300	TraesCS3A02G074300.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3A02G074400	TraesCS3A02G074400.1	IPR001128:Cytochrome P450 IPR036396:Cytochrome P450 superfamily
	TraesCS3A02G074400	TraesCS3A02G074400.2	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3A02G074500	TraesCS3A02G074500.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3A02G075300	TraesCS3A02G075300.1	IPR036047:F-box-like domain superfamily
	TraesCS3A02G076000	TraesCS3A02G076000.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS3A02G077300	TraesCS3A02G077300.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
A.X.94526408	TraesCS3B02G133000	TraesCS3B02G133000.1	IPR001810:F-box domain IPR005174:Domain unknown function DUF295 IPR036047:F-box-like domain superfamily
	TraesCS3B02G133600	TraesCS3B02G133600.1	Uncharacterized protein IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3B02G133700	TraesCS3B02G133700.1	Uncharacterized protein IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3B02G134100	TraesCS3B02G134100.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
3B	TraesCS3B02G135000	TraesCS3B02G135000.1	Uncharacterized protein IPR011009:Protein kinase-like domain superfamily
	TraesCS3B02G135300	TraesCS3B02G135300.1	IPR003657:WRKY domain IPR036576:WRKY domain superfamily
	TraesCS3B02G136100	TraesCS3B02G136100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS3B02G136200	TraesCS3B02G136200.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3B02G136800	TraesCS3B02G136800.1	Uncharacterized protein IPR003439:ABC transporter-like IPR003593:AAA+ ATPase domain IPR011527:ABC transporter type 1, transmembrane domain IPR017871:ABC transporter, conserved site IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR036640:ABC transporter type 1, transmembrane domain superfamily IPR039421:Type I protein exporter

AX.94948233	TraesCS3D02G365400	TraesCS3D02G365400.1	IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS3D02G366300	TraesCS3D02G366300.1	IPR001611:Leucine-rich repeat IPR006553:Leucine-rich repeat, cysteine-containing subtype IPR032675:Leucine-rich repeat domain superfamily
	TraesCS3D02G366300	TraesCS3D02G366300.2	IPR001611:Leucine-rich repeat IPR006553:Leucine-rich repeat, cysteine-containing subtype IPR032675:Leucine-rich repeat domain superfamily
3D	TraesCS3D02G366300	TraesCS3D02G366300.3	IPR001611:Leucine-rich repeat IPR006553:Leucine-rich repeat, cysteine-containing subtype IPR032675:Leucine-rich repeat domain superfamily
	TraesCS3D02G367500	TraesCS3D02G367500.1	IPR001128:Cytochrome P450 IPR002397:Cytochrome P450, B-class IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS3D02G368300	TraesCS3D02G368300.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS3D02G369100	TraesCS3D02G369100.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS3D02G369100	TraesCS3D02G369100.2	IPR011009:Protein kinase-like domain superfamily IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
	TraesCS4A02G361100	TraesCS4A02G361100.1	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR039192:Glycogen synthase kinase 3, catalytic domain
AX.94428968	TraesCS4A02G366300	TraesCS4A02G366300.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS4A02G473900	TraesCS4A02G473900.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS4A02G474400	TraesCS4A02G474400.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS4A02G474600	TraesCS4A02G474600.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS4A02G474700	TraesCS4A02G474700.1	IPR032675:Leucine-rich repeat domain superfamily
	TraesCS4A02G474800	TraesCS4A02G474800.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008266:Tyrosine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
	TraesCS4A02G474800	TraesCS4A02G474800.2	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008266:Tyrosine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
	TraesCS4A02G474900	TraesCS4A02G474900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS4A02G474900	TraesCS4A02G474900.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS4A02G475400	TraesCS4A02G475400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
	TraesCS4A02G475700	TraesCS4A02G475700.1	IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
	TraesCS4A02G475800	TraesCS4A02G475800.1	IPR032675:Leucine-rich repeat domain superfamily IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
	TraesCS4A02G475900	TraesCS4A02G475900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily

TraesCS4A02G475900	TraesCS4A02G475900.3	IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G475900	TraesCS4A02G475900.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476100	TraesCS4A02G476100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476300	TraesCS4A02G476300.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476200	TraesCS4A02G476200.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS4A02G476400	TraesCS4A02G476400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476600	TraesCS4A02G476600.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476600	TraesCS4A02G476600.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476700	TraesCS4A02G476700.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G476800	TraesCS4A02G476800.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
TraesCS4A02G476900	TraesCS4A02G476900.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
TraesCS4A02G477300	TraesCS4A02G477300.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal
TraesCS4A02G477400	TraesCS4A02G477400.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G477600	TraesCS4A02G477600.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G477700	TraesCS4A02G477700.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal
TraesCS4A02G477800	TraesCS4A02G477800.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G478000	TraesCS4A02G478000.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G478100	TraesCS4A02G478100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal
TraesCS4A02G478200	TraesCS4A02G478200.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G478400	TraesCS4A02G478400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G478600	TraesCS4A02G478600.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS4A02G478700	TraesCS4A02G478700.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily

TraesCS4A02G478800	TraesCS4A02G478800.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G478900	TraesCS4A02G478900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G479100	TraesCS4A02G479100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal
TraesCS4A02G479200	TraesCS4A02G479200.1	IPR001611:Leucine-rich repeat IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G479300	TraesCS4A02G479300.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS4A02G479400	TraesCS4A02G479400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS4A02G479700	TraesCS4A02G479700.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS4A02G479900	TraesCS4A02G479900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
TraesCS4A02G480000	TraesCS4A02G480000.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G480100	TraesCS4A02G480100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS4A02G480200	TraesCS4A02G480200.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G480300	TraesCS4A02G480300.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G480400	TraesCS4A02G480400.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
TraesCS4A02G481200	TraesCS4A02G481200.1	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS4A02G481300	TraesCS4A02G481300.4	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase
TraesCS4A02G481300	TraesCS4A02G481300.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase
TraesCS4A02G481300	TraesCS4A02G481300.5	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS4A02G481300	TraesCS4A02G481300.2	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase
TraesCS4A02G481300	TraesCS4A02G481300.3	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase
TraesCS4A02G481600	TraesCS4A02G481600.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS4A02G482500	TraesCS4A02G482500.1	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G482600	TraesCS4A02G482600.1	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily

TraesCS4A02G482700	TraesCS4A02G482700.1		IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G482800	TraesCS4A02G482800.1		IPR001611:Leucine-rich repeat IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G482900	TraesCS4A02G482900.1		IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G483000	TraesCS4A02G483000.1		IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G483200	TraesCS4A02G483200.1		IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
TraesCS4A02G483300	TraesCS4A02G483300.1		IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G483300	TraesCS4A02G483300.2		IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G483300	TraesCS4A02G483300.3		IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily
TraesCS4A02G483400	TraesCS4A02G483400.1		IPR001611:Leucine-rich repeat
TraesCS4A02G483500	TraesCS4A02G483500.1		IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR032675:Leucine-rich repeat domain superfamily
		Serine/threonine-protein kinase	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site
TraesCS4A02G483600	TraesCS4A02G483600.1	[Source:UniProtKB/TrEMBL;Accession:W5DMF5]	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
			IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR032675:Leucine-rich repeat domain superfamily
AX.94828722	TraesCS4A02G483700	TraesCS4A02G483700.1	
	TraesCS4B02G384500	TraesCS4B02G384500.1	IPR036047:F-box-like domain superfamily
		Peroxidase	IPR000823:Plant peroxidase IPR002016:Haem peroxidase IPR010255:Haem peroxidase superfamily
	TraesCS4B02G385000	TraesCS4B02G385000.1	[Source:UniProtKB/TrEMBL;Accession:A0A1D5XGR8] IPR019793:Peroxidases haem-ligand binding site IPR019794:Peroxidase, active site IPR033905:Secretory peroxidase
	TraesCS4B02G387600	TraesCS4B02G387600.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
	TraesCS4B02G388000	TraesCS4B02G388000.1	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS4B02G388500	TraesCS4B02G388500.1	IPR036047:F-box-like domain superfamily
	TraesCS4B02G388600	TraesCS4B02G388600.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
			IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
		Protein DETOXIFICATION	
	TraesCS4B02G388800	TraesCS4B02G388800.1	[Source:UniProtKB/TrEMBL;Accession:A0A1D6DH59] IPR002528:Multi antimicrobial extrusion protein
	TraesCS4B02G389200	TraesCS4B02G389200.1	IPR036047:F-box-like domain superfamily
	TraesCS4B02G389300	TraesCS4B02G389300.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS4B02G389400	TraesCS4B02G389400.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS4B02G389600	TraesCS4B02G389600.1	IPR036047:F-box-like domain superfamily

				IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001611:Leucine-rich repeat IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024788:Malectin-like domain IPR025875:Leucine rich repeat 4 IPR032675:Leucine-rich repeat domain superfamily
	TraesCS4B02G389700	TraesCS4B02G389700.1		
	TraesCS4B02G391600	TraesCS4B02G391600.1		IPR036047:F-box-like domain superfamily
	TraesCS4B02G392900	TraesCS4B02G392900.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
AX.94792356	TraesCS4D02G074100	TraesCS4D02G074100.1		IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR011009:Protein kinase-like domain superfamily IPR032675:Leucine-rich repeat domain superfamily
			SNF1-type serine-threonine protein kinase	
4D	TraesCS4D02G078100	TraesCS4D02G078100.1	[Source:UniProtKB/TrEMBL;Accession:W5ES46]	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			SNF1-type serine-threonine protein kinase	
	TraesCS4D02G078100	TraesCS4D02G078100.1	[Source:UniProtKB/TrEMBL;Accession:W5ES46]	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily
	TraesCS4D02G079000	TraesCS4D02G079000.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
AX.94699167	TraesCS5A02G387000	TraesCS5A02G387000.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5A02G387100	TraesCS5A02G387100.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5A02G388600	TraesCS5A02G388600.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
				IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type
	TraesCS5A02G388800	TraesCS5A02G388800.1		IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
			Tousled-like protein kinase	
	TraesCS5A02G389200	TraesCS5A02G389200.1	[Source:UniProtKB/TrEMBL;Accession:Q516Y0]	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			Tousled-like protein kinase	
	TraesCS5A02G389200	TraesCS5A02G389200.1	[Source:UniProtKB/TrEMBL;Accession:Q516Y0]	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
5A			Protein TORNADO 1	
	TraesCS5A02G390900	TraesCS5A02G390900.1	[Source:Projected from Arabidopsis thaliana (AT5G55540) UniProtKB/Swiss-Prot;Accession:Q9FJ57]	IPR001611:Leucine-rich repeat IPR032675:Leucine-rich repeat domain superfamily

	TraesCS5A02G391900	TraesCS5A02G391900.1	CYB5 [Source:UniProtKB/TrEMBL;Acc:M9PJX7] CYB5 Protein kinase superfamily protein [Source:Projected from	IPR001199:Cytochrome b5-like heme/steroid binding domain IPR018506:Cytochrome b5, heme-binding site IPR036400:Cytochrome b5-like heme/steroid binding domain superfamily
	TraesCS5A02G392500	TraesCS5A02G392500.1	Arabidopsis thaliana (AT1G69220) UniProtKB/TrEMBL;Acc:O245 27]	IPR000719:Protein kinase domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5A02G393000	TraesCS5A02G393000.1		IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
A.X.94406039	TraesCS5B02G003200	TraesCS5B02G003200.1		IPR001611:Leucine-rich repeat IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5B02G003200	TraesCS5B02G003200.2		IPR001611:Leucine-rich repeat IPR032675:Leucine-rich repeat domain superfamily IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
	TraesCS5B02G004300	TraesCS5B02G004300.1		IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR031071:LRR receptor-like serine/threonine-protein kinase FEI1/2 IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5B02G004500	TraesCS5B02G004500.1		IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5B02G004600	TraesCS5B02G004600.1		IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5B02G004900	TraesCS5B02G004900.1		IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5B02G005400	TraesCS5B02G005400.2		IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
5B	TraesCS5B02G005400	TraesCS5B02G005400.1		IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5B02G005400	TraesCS5B02G005400.3		IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5B02G005700	TraesCS5B02G005700.1		IPR000719:Protein kinase domain IPR002182:NB-ARC IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR027417:P-loop containing nucleoside triphosphate hydrolase
	TraesCS5B02G007000	TraesCS5B02G007000.2		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5B02G007000	TraesCS5B02G007000.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily



			p450	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5B02G007100	TraesCS5B02G007100.1	[Source:UniProtKB/TrEMBL;Accession:Q58A30] P450	
			p450	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5B02G007200	TraesCS5B02G007200.1	[Source:UniProtKB/TrEMBL;Accession:Q58A32] P450	
AX.95010548	TraesCS5B02G056700	TraesCS5B02G056700.1		IPR000719:Protein kinase domain IPR002902:Gnk2-homologous domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR038408:Gnk2-homologous domain superfamily
	TraesCS5B02G056800	TraesCS5B02G056800.1		IPR000719:Protein kinase domain IPR002902:Gnk2-homologous domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR038408:Gnk2-homologous domain superfamily
	TraesCS5B02G056900	TraesCS5B02G056900.1		IPR000719:Protein kinase domain IPR002902:Gnk2-homologous domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR038408:Gnk2-homologous domain superfamily
	TraesCS5B02G057205	TraesCS5B02G057205.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR025287:Wall-associated receptor kinase, galacturonan-binding domain
	TraesCS5B02G057500	TraesCS5B02G057500.1		IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5B02G057700	TraesCS5B02G057700.1		IPR000719:Protein kinase domain IPR002902:Gnk2-homologous domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR038408:Gnk2-homologous domain superfamily
	TraesCS5B02G057900	TraesCS5B02G057900.1		IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS5B02G058100	TraesCS5B02G058100.1		IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
5B	TraesCS5B02G058300	TraesCS5B02G058300.1		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS5B02G058900	TraesCS5B02G058900.1		IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5B02G059000	TraesCS5B02G059000.2		IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5B02G059000	TraesCS5B02G059000.1		IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily

			Non-specific serine/threonine protein kinase [Source:UniProtKB/TrEMBL;Acc:A0A341VB71]	IPR000719:Protein kinase domain IPR004041:NAF domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR018451:NAF/FISL domain
				IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	#N/A			IPR032675:Leucine-rich repeat domain superfamily
				IPR025287:Wall-associated receptor kinase, galacturonan-binding domain
				IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR011009:Protein kinase-like domain superfamily IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
				IPR013989:Development/cell death domain
				IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site
5B			Serine/threonine-protein kinase [Source:UniProtKB/TrEMBL;Acc:W5FIJ2]	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
				IPR001611:Leucine-rich repeat IPR011049:Serralysin-like metalloprotease, C-terminal
				IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
				IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
				IPR011009:Protein kinase-like domain superfamily
				IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
				IPR011009:Protein kinase-like domain superfamily
			Sucrose non-fermenting-1-related protein kinase 2.8 [Source:UniProtKB/TrEMBL;Acc:W5F978]	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
A.X.94457982			Sucrose non-fermenting-1-related protein kinase 2.8	IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
			Protein kinase domain-containing protein	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site
				IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
				IPR030616:Aurora kinase
			Allene oxide synthase, chloroplastic [Source:Projected from Arabidopsis thaliana (AT5G42650) UniProtKB/SwissProt;Acc:Q96242]	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
5B			Protein DETOXIFICATION [Source:UniProtKB/TrEMBL;Acc:A0A341VJT2]	IPR002528:Multi antimicrobial extrusion protein

	TraesCS5B02G410900	TraesCS5B02G410900.1	IPR000719:Protein kinase domain IPR001220:Legume lectin domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013320:Concanavalin A-like lectin/glucanase domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5B02G411200	TraesCS5B02G411200.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
AX.95126753	TraesCS5D02G003500	TraesCS5D02G003500.1	IPR000008:C2 domain IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR035892:C2 domain superfamily
	TraesCS5D02G004900	TraesCS5D02G004900.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G005300	TraesCS5D02G005300.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5D02G005400	TraesCS5D02G005400.1	IPR000719:Protein kinase domain IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5D02G005416	TraesCS5D02G005416.1	IPR001611:Leucine-rich repeat IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5D02G005600	TraesCS5D02G005600.1	IPR001611:Leucine-rich repeat IPR002182:NB-ARC IPR025875:Leucine rich repeat 4 IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5D02G006200	TraesCS5D02G006200.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G006400	TraesCS5D02G006400.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G006500	TraesCS5D02G006500.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G006800	TraesCS5D02G006800.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G006900	TraesCS5D02G006900.1	IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS5D02G007100	TraesCS5D02G007100.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase
	TraesCS5D02G007100	TraesCS5D02G007100.3	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS5D02G007100	TraesCS5D02G007100.2	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site

	TraesCS5D02G007200	TraesCS5D02G007200.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR031071:LRR receptor-like serine/threonine-protein kinase FEI1/2 IPR032675:Leucine-rich repeat domain superfamily
	TraesCS5D02G009100	TraesCS5D02G009100.1	IPR005797:Cytochrome b/b6, N-terminal IPR016174:Di-haem cytochrome, transmembrane IPR027387:Cytochrome b/b6-like domain superfamily
	TraesCS5D02G011700	TraesCS5D02G011700.1	IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS5D02G012000	TraesCS5D02G012000.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G012100	TraesCS5D02G012100.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G012200	TraesCS5D02G012200.1	IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G012300	TraesCS5D02G012300.1	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
	TraesCS5D02G012300	TraesCS5D02G012300.2	IPR001128:Cytochrome P450 IPR002403:Cytochrome P450, E-class, group IV IPR036396:Cytochrome P450 superfamily
AX.95086097	TraesCS6A02G077200	TraesCS6A02G077200.1	IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS6A02G077600	TraesCS6A02G077600.1	IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G077700	TraesCS6A02G077700.1	IPR001810:F-box domain IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G077900	TraesCS6A02G077900.1	IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily
	TraesCS6A02G078000	TraesCS6A02G078000.1	IPR001810:F-box domain IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G078100	TraesCS6A02G078100.1	IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily
	TraesCS6A02G078200	TraesCS6A02G078200.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G078500	TraesCS6A02G078500.1	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001480:Bulb-type lectin domain
	TraesCS6A02G078700	TraesCS6A02G078700.1	IPR003609:PAN/Apple domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily
6A	TraesCS6A02G080100	TraesCS6A02G080100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
		WRKY DNA-binding protein 55 [Source:Projected from Arabidopsis thaliana (AT2G40740) TAIR;Acc:AT2G40740]	IPR003657:WRKY domain IPR036576:WRKY domain superfamily
	TraesCS6A02G080500	TraesCS6A02G080500.1	
	TraesCS6A02G081800	TraesCS6A02G081800.1	Uncharacterized protein IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily

	TraesCS6A02G081900	TraesCS6A02G081900.1	Uncharacterized protein	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS6A02G082000	TraesCS6A02G082000.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR036396:Cytochrome P450 superfamily
	TraesCS6A02G082700	TraesCS6A02G082700.1		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G083500	TraesCS6A02G083500.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS6A02G083600	TraesCS6A02G083600.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS6A02G083800	TraesCS6A02G083800.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
A.X.95019005	TraesCS6A02G367600	TraesCS6A02G367600.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS6A02G369100	TraesCS6A02G369100.2		IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G369100	TraesCS6A02G369100.1		IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G369600	TraesCS6A02G369600.1		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G369700	TraesCS6A02G369700.1		IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS6A02G370000	TraesCS6A02G370000.1		IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G370200	TraesCS6A02G370200.1		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G370400	TraesCS6A02G370400.1		IPR032675:Leucine-rich repeat domain superfamily
	TraesCS6A02G370700	TraesCS6A02G370700.2		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G371600	TraesCS6A02G371600.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS6A02G371900	TraesCS6A02G371900.1		IPR032675:Leucine-rich repeat domain superfamily
	TraesCS6A02G372800	TraesCS6A02G372800.1		IPR032675:Leucine-rich repeat domain superfamily
	TraesCS6A02G373100	TraesCS6A02G373100.1		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS6A02G373600	TraesCS6A02G373600.1		IPR013187:F-box associated domain, type 3 IPR017451:F-box associated interaction domain IPR036047:F-box-like domain superfamily
	TraesCS6A02G374100	TraesCS6A02G374100.1	Protein kinase superfamily protein [Source:Projected from Arabidopsis thaliana (AT2G39190) UniProtKB/TrEMBL;Acc:O80962]	IPR000719:Protein kinase domain IPR002575:Aminoglycoside phosphotransferase IPR004147:UbiB domain IPR011009:Protein kinase-like domain superfamily
	TraesCS6A02G374700	TraesCS6A02G374700.1	IRE1 [Source:UniProtKB/TrEMBL;Acc:A0A2C9PG52] IRE1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR010513:KEN domain IPR011009:Protein kinase-like domain superfamily IPR011047:Quinoprotein alcohol dehydrogenase-like superfamily IPR015943:WD40/YVTN repeat-like-containing domain superfamily IPR018997:PUB domain IPR038357:KEN domain superfamily
A.X.95097189	TraesCS6B02G067400	TraesCS6B02G067400.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily
	TraesCS6B02G067500	TraesCS6B02G067500.1		IPR032675:Leucine-rich repeat domain superfamily
	TraesCS6B02G067700	TraesCS6B02G067700.1		IPR001810:F-box domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily

TraesCS6B02G067800	TraesCS6B02G067800.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR036537:Adaptor protein Cbl, N-terminal domain superfamily
TraesCS6B02G069300	TraesCS6B02G069300.2	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily
TraesCS6B02G069300	TraesCS6B02G069300.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily
TraesCS6B02G069300	TraesCS6B02G069300.3	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily
TraesCS6B02G069300	TraesCS6B02G069300.4	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily
TraesCS6B02G069400	TraesCS6B02G069400.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G069400	TraesCS6B02G069400.3	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily
TraesCS6B02G069400	TraesCS6B02G069400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G069500	TraesCS6B02G069500.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G069700	TraesCS6B02G069700.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G069700	TraesCS6B02G069700.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G069800	TraesCS6B02G069800.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
TraesCS6B02G069900	TraesCS6B02G069900.2	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G069900	TraesCS6B02G069900.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G070200	TraesCS6B02G070200.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal

TraesCS6B02G070300	TraesCS6B02G070300.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS6B02G070400	TraesCS6B02G070400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G070500	TraesCS6B02G070500.2	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled- coil domain IPR041118:Rx, N-terminal
TraesCS6B02G070500	TraesCS6B02G070500.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled- coil domain IPR041118:Rx, N-terminal
TraesCS6B02G070700	TraesCS6B02G070700.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily
TraesCS6B02G070800	TraesCS6B02G070800.1	IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS6B02G070900	TraesCS6B02G070900.3	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily
TraesCS6B02G070900	TraesCS6B02G070900.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled- coil domain IPR041118:Rx, N-terminal
TraesCS6B02G070900	TraesCS6B02G070900.2	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled- coil domain IPR041118:Rx, N-terminal
TraesCS6B02G071000	TraesCS6B02G071000.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
TraesCS6B02G071200	TraesCS6B02G071200.1	IPR000823:Plant peroxidase IPR002016:Haem peroxidase IPR010255:Haem peroxidase superfamily IPR019793:Peroxidases haem-ligand binding site IPR019794:Peroxidase, active site
TraesCS6B02G072700	TraesCS6B02G072700.1	IPR033905:Secretory peroxidase IPR001810:F-box domain IPR036047:F-box-like domain superfamily
TraesCS6B02G073000	TraesCS6B02G073000.1	IPR000719:Protein kinase domain IPR000742:EGF-like domain IPR001881:EGF-like calcium-binding domain IPR008271:Serine/threonine-protein kinase, active site IPR009030:Growth factor receptor cysteine-rich domain superfamily IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR025287:Wall-associated receptor kinase, galacturonan- binding domain

Peroxidase

TraesCS6B02G071200 TraesCS6B02G071200.1 [Source:UniProtKB/TrEMBL;Accession:A0A1D6B2B4]

6B	AX.94407285	TraesCS6B02G199500	TraesCS6B02G199500.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily	
		TraesCS6B02G200100	TraesCS6B02G200100.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily	
		TraesCS6B02G200700	TraesCS6B02G200700.1	IPR001810:F-box domain IPR006566:FBD domain IPR036047:F-box-like domain superfamily	
	AX.94978939	TraesCS7A02G455300	TraesCS7A02G455300.1 Cytochrome P450 like protein [Source:Projected from Arabidopsis thaliana (AT1G11600) UniProtKB/TrEMBL;Acc:Q9SAB7]	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
7A		TraesCS7A02G455700	TraesCS7A02G455700.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily	
		TraesCS7A02G455800	TraesCS7A02G455800.1 Serine/threonine-protein kinase [Source:UniProtKB/TrEMBL;Acc:A0A1D6BQ19]	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily	
		TraesCS7A02G456100	TraesCS7A02G456100.1	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR036426:Bulb-type lectin domain superfamily	
		TraesCS7A02G456200	TraesCS7A02G456200.1	IPR000719:Protein kinase domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily	
		TraesCS7A02G456300	TraesCS7A02G456300.1	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR024171:S-receptor-like serine/threonine-protein kinase IPR036426:Bulb-type lectin domain superfamily	
		TraesCS7A02G456800	TraesCS7A02G456800.1	IPR000719:Protein kinase domain IPR000858:S-locus glycoprotein domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR001480:Bulb-type lectin domain IPR003609:PAN/Apple domain IPR011009:Protein kinase-like domain superfamily IPR036426:Bulb-type lectin domain superfamily	
		TraesCS7A02G456900	TraesCS7A02G456900.1	IPR011009:Protein kinase-like domain superfamily	
		TraesCS7A02G457500	TraesCS7A02G457500.1	IPR032675:Leucine-rich repeat domain superfamily	
		AX.94535772	TraesCS7B02G045500	TraesCS7B02G045500.1	IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
			TraesCS7B02G045600	TraesCS7B02G045600.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily



	TraesCS7B02G047300	TraesCS7B02G047300.4	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
7B	TraesCS7B02G047300	TraesCS7B02G047300.1	IPR000270:PB1 domain IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS7B02G047300	TraesCS7B02G047300.3	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS7B02G047300	TraesCS7B02G047300.2	IPR000270:PB1 domain IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
	TraesCS7B02G048900	TraesCS7B02G048900.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR008271:Serine/threonine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site
#N/A	TraesCS7B02G434800	TraesCS7B02G434800.1	IPR001810:F-box domain IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS7B02G434900	TraesCS7B02G434900.1	IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS7B02G435000	TraesCS7B02G435000.1	IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS7B02G435100	TraesCS7B02G435100.1	IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS7B02G435200	TraesCS7B02G435200.1	IPR006566:FBD domain IPR032675:Leucine-rich repeat domain superfamily IPR036047:F-box-like domain superfamily
	TraesCS7B02G436300	TraesCS7B02G436300.1	IPR032675:Leucine-rich repeat domain superfamily
	TraesCS7B02G437300	TraesCS7B02G437300.1	IPR002182:NB-ARC IPR008480:Protein of unknown function DUF761, plant IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS7B02G437300	TraesCS7B02G437300.2	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS7B02G437300	TraesCS7B02G437300.3	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS7B02G437400	TraesCS7B02G437400.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
	TraesCS7B02G437800	TraesCS7B02G437800.1	Cytochrome P450 [Source:UniProtKB/TrEMBL;Accession:Q9AVM3] Cytochrome P450 IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS7B02G438400	TraesCS7B02G438400.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily
	TraesCS7B02G438500	TraesCS7B02G438500.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily

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TraesCS7B02G438600	TraesCS7B02G438600.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G438700	TraesCS7B02G438700.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G438900	TraesCS7B02G438900.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G439000	TraesCS7B02G439000.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G439300	TraesCS7B02G439300.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G439400	TraesCS7B02G439400.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G439700	TraesCS7B02G439700.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G439800	TraesCS7B02G439800.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G440000	TraesCS7B02G440000.2	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily	
TraesCS7B02G440000	TraesCS7B02G440000.1	IPR000719:Protein kinase domain IPR001245:Serine-threonine/tyrosine-protein kinase, catalytic domain IPR011009:Protein kinase-like domain superfamily	
TraesCS7B02G440600	TraesCS7B02G440600.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G440700	TraesCS7B02G440700.1	IPR001128:Cytochrome P450 IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G440800	TraesCS7B02G440800.2	IPR032675:Leucine-rich repeat domain superfamily	
TraesCS7B02G440800	TraesCS7B02G440800.1	IPR032675:Leucine-rich repeat domain superfamily	
TraesCS7B02G440900	TraesCS7B02G440900.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G441100	TraesCS7B02G441100.1	IPR001128:Cytochrome P450 IPR002401:Cytochrome P450, E-class, group I IPR017972:Cytochrome P450, conserved site IPR036396:Cytochrome P450 superfamily	
TraesCS7B02G441200	TraesCS7B02G441200.1	IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR011009:Protein kinase-like domain superfamily IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily	
AX.94860625	TraesCS7D02G539900	TraesCS7D02G539900.1	IPR001810:F-box domain IPR005174:Domain unknown function DUF295 IPR036047:F-box-like domain superfamily
	TraesCS7D02G540000	TraesCS7D02G540000.1	IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS7D02G540100	TraesCS7D02G540100.1	IPR001810:F-box domain IPR005174:Domain unknown function DUF295 IPR036047:F-box-like domain superfamily
	TraesCS7D02G540500	TraesCS7D02G540500.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
	TraesCS7D02G540600	TraesCS7D02G540600.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal

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		Protein DETOXIFICATION
TraesCS7D02G541200	TraesCS7D02G541200.1	[Source:UniProtKB/TrEMBL;A IPR002528:Multi antimicrobial extrusion protein cc:W5HZB8]
		Protein DETOXIFICATION
TraesCS7D02G541800	TraesCS7D02G541800.1	[Source:UniProtKB/TrEMBL;A IPR002528:Multi antimicrobial extrusion protein cc:A0A341Z7X7]
TraesCS7D02G542100	TraesCS7D02G542100.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS7D02G542200	TraesCS7D02G542200.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR036388:Winged helix-like DNA-binding domain superfamily
TraesCS7D02G542300	TraesCS7D02G542300.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G542500	TraesCS7D02G542500.1	IPR032675:Leucine-rich repeat domain superfamily
TraesCS7D02G542600	TraesCS7D02G542600.1	IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily IPR000719:Protein kinase domain IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR008266:Tyrosine-protein kinase, active site IPR011009:Protein kinase-like domain superfamily IPR017441:Protein kinase, ATP binding site IPR032675:Leucine-rich repeat domain superfamily
TraesCS7D02G542700	TraesCS7D02G542700.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G543900	TraesCS7D02G543900.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G544100	TraesCS7D02G544100.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G544300	TraesCS7D02G544300.1	IPR002182:NB-ARC IPR003591:Leucine-rich repeat, typical subtype IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR027806:Harbinger transposase-derived nuclease domain IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G544500	TraesCS7D02G544500.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G544600	TraesCS7D02G544600.1	IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G546100	TraesCS7D02G546100.1	IPR002182:NB-ARC IPR003593:AAA+ ATPase domain IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS7D02G546400	TraesCS7D02G546400.1	IPR002182:NB-ARC IPR003593:AAA+ ATPase domain IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR032675:Leucine-rich repeat domain superfamily IPR041118:Rx, N-terminal
TraesCS7D02G546500	TraesCS7D02G546500.1	IPR002182:NB-ARC IPR003593:AAA+ ATPase domain IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR041118:Rx, N-terminal

TraesCS7D02G546800	TraesCS7D02G546800.1		IPR036047:F-box-like domain superfamily
TraesCS7D02G547100	TraesCS7D02G547100.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
TraesCS7D02G548100	TraesCS7D02G548100.1		IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G549000	TraesCS7D02G549000.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase
TraesCS7D02G549200	TraesCS7D02G549200.1		IPR032675:Leucine-rich repeat domain superfamily IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G549500	TraesCS7D02G549500.1		IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
TraesCS7D02G549700	TraesCS7D02G549700.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G550000	TraesCS7D02G550000.1		IPR032675:Leucine-rich repeat domain superfamily
TraesCS7D02G550100	TraesCS7D02G550100.1	F-box domain-containing protein	IPR001611:Leucine-rich repeat IPR003591:Leucine-rich repeat, typical subtype IPR013210:Leucine-rich repeat-containing N-terminal, plant-type IPR032675:Leucine-rich repeat domain superfamily
TraesCS7D02G550300	TraesCS7D02G550300.1		IPR002182:NB-ARC IPR027417:P-loop containing nucleoside triphosphate hydrolase IPR038005:Virus X resistance protein-like, coiled-coil domain IPR041118:Rx, N-terminal
TraesCS7D02G550400	TraesCS7D02G550400.1		IPR036047:F-box-like domain superfamily
TraesCS7D02G551100	TraesCS7D02G551100.1		IPR001810:F-box domain IPR036047:F-box-like domain superfamily

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