

Cluster	GO term (p-value)
1	response to wounding ( $6.2 \times 10^{-4}$ ) cellular amino acid and derivative metabolic process ( $1.12 \times 10^{-3}$ ) lignin biosynthetic process ( $1.72 \times 10^{-3}$ ) trans-cinnamate 4-monooxygenase activity ( $2.22 \times 10^{-3}$ ) quercetin 3-O-methyltransferase activity ( $2.22 \times 10^{-3}$ ) myricetin 3'-O-methyltransferase activity ( $2.22 \times 10^{-3}$ ) ferulate 5-hydroxylase activity ( $2.22 \times 10^{-3}$ ) caffeate O-methyltransferase activity ( $2.22 \times 10^{-3}$ ) response to stimulus ( $5.05 \times 10^{-3}$ ) response to radiation ( $1.62 \times 10^{-2}$ ) beta-fructofuranosidase activity ( $2.43 \times 10^{-2}$ ) cell wall ( $2.57 \times 10^{-2}$ ) 4-coumarate-CoA ligase activity ( $2.65 \times 10^{-2}$ ) catalytic activity ( $3.92 \times 10^{-2}$ ) flavonol biosynthetic process ( $4.89 \times 10^{-2}$ )
2	acyl-CoA thioesterase activity ( $4.34 \times 10^{-2}$ )
3	protein disulfide isomerase activity ( $1.43 \times 10^{-4}$ ) intramolecular oxidoreductase activity ( $1.28 \times 10^{-3}$ ) cell wall ( $1.69 \times 10^{-3}$ ) cyclic-nucleotide phosphodiesterase activity ( $6.04 \times 10^{-3}$ ) lytic vacuole within protein storage vacuole ( $7.45 \times 10^{-3}$ ) storage vacuole ( $2.98 \times 10^{-2}$ )
4	electron carrier activity ( $3.99 \times 10^{-4}$ ) chitinase activity ( $6.02 \times 10^{-3}$ ) intracellular ligand-gated ion channel activity ( $1.51 \times 10^{-2}$ ) multi-organism process ( $2.21 \times 10^{-2}$ ) apoplast ( $2.60 \times 10^{-2}$ ) response to bacterium ( $2.76 \times 10^{-2}$ ) ligand-gated channel activity ( $3.22 \times 10^{-2}$ ) endomembrane system ( $3.27 \times 10^{-2}$ ) cell wall ( $4.45 \times 10^{-2}$ )
5	extracellular matrix structural constituent ( $1.05 \times 10^{-2}$ ) shikimate O-hydroxycinnamoyltransferase activity ( $1.05 \times 10^{-2}$ ) quinic O-hydroxycinnamoyltransferase activity ( $1.05 \times 10^{-2}$ ) hydroxycinnamoyltransferase activity ( $3.15 \times 10^{-2}$ )
6	phosphate transport ( $1.46 \times 10^{-3}$ ) carbohydrate transmembrane transporter activity ( $2.26 \times 10^{-3}$ ) solute:cation symporter activity ( $2.32 \times 10^{-3}$ ) anion transport ( $3.45 \times 10^{-2}$ ) sugar:hydrogen symporter activity ( $3.77 \times 10^{-2}$ )
7	response to stimulus ( $7.93 \times 10^{-3}$ ) endoplasmic reticulum lumen ( $1.28 \times 10^{-2}$ ) nitrate transmembrane transporter activity ( $1.57 \times 10^{-2}$ ) protein amino acid phosphorylation ( $2.3 \times 10^{-2}$ )

8	chloroplast ( $6.11 \times 10^{-6}$ )
	chloroplast thylakoid membrane ( $1.83 \times 10^{-4}$ )
	thylakoid membrane ( $2.33 \times 10^{-4}$ )
	anchored to plasma membrane ( $2.62 \times 10^{-4}$ )
	plant-type cell wall ( $4.63 \times 10^{-4}$ )
	plastid thylakoid ( $5.38 \times 10^{-4}$ )
	chloroplast stroma ( $1.39 \times 10^{-3}$ )
	cytoplasm ( $5.16 \times 10^{-3}$ )
	external encapsulating structure ( $1.72 \times 10^{-2}$ )
	organelle part ( $2.34 \times 10^{-2}$ )
	unfolded protein binding ( $3 \times 10^{-2}$ )
	intracellular membrane-bounded organelle ( $4.3 \times 10^{-2}$ )
9	oligopeptide transporter activity ( $3.17 \times 10^{-3}$ )
	cellular metal ion homeostasis ( $5.91 \times 10^{-3}$ )
	pectinesterase inhibitor activity ( $6.63 \times 10^{-3}$ )
	oligopeptide transport ( $9.39 \times 10^{-3}$ )
	cellular ion homeostasis ( $10 \times 10^{-3}$ )
	polygalacturonase activity ( $1.01 \times 10^{-2}$ )
	cation homeostasis ( $1.01 \times 10^{-2}$ )
	chemical homeostasis ( $1.26 \times 10^{-2}$ )
	cellular homeostasis ( $1.80 \times 10^{-2}$ )
	enzyme regulator activity ( $3.57 \times 10^{-2}$ )
10	chloroplast ( $5.03 \times 10^{-3}$ )
	chloroplast thylakoid membrane ( $3.61 \times 10^{-2}$ )
	thylakoid membrane ( $4.02 \times 10^{-2}$ )
	low affinity phosphate transmembrane transporter activity ( $4.68 \times 10^{-2}$ )
11	photosynthetic electron transport in photosystem II ( $NaN \times 10^{-Inf}$ )
	protein import into chloroplast thylakoid membrane ( $NaN \times 10^{-Inf}$ )
	thylakoid membrane organization ( $NaN \times 10^{-Inf}$ )
	electron transport chain ( $NaN \times 10^{-Inf}$ )
	photosynthesis, light reaction ( $NaN \times 10^{-Inf}$ )
	membrane organization ( $NaN \times 10^{-Inf}$ )
	plastid organization ( $NaN \times 10^{-Inf}$ )
	protein targeting ( $NaN \times 10^{-Inf}$ )
	cellular protein localization ( $NaN \times 10^{-Inf}$ )
	protein transport ( $NaN \times 10^{-Inf}$ )
	macromolecule localization ( $NaN \times 10^{-Inf}$ )
	intracellular transport ( $NaN \times 10^{-Inf}$ )
	signal recognition particle, endoplasmic reticulum targeting ( $1.06 \times 10^{-2}$ )
12	
13	6-phosphogluconolactonase activity ( $1.96 \times 10^{-2}$ )
	omega-3 fatty acid desaturase activity ( $3.92 \times 10^{-2}$ )
	water homeostasis ( $3.97 \times 10^{-2}$ )
	cellular potassium ion homeostasis ( $4.96 \times 10^{-2}$ )
14	protein heterodimerization activity ( $2.35 \times 10^{-3}$ )

	autophagic vacuole ( $1.94 \times 10^{-2}$ )
	detection of fungus ( $2.43 \times 10^{-2}$ )
15	cell-cell signaling ( $1.70 \times 10^{-2}$ )
	signal transducer activity ( $3.65 \times 10^{-2}$ )
16	jasmonic acid biosynthetic process ( $6.77 \times 10^{-3}$ )
	oxylin metabolic process ( $8.6 \times 10^{-3}$ )
	immune response ( $1.64 \times 10^{-2}$ )
	allene-oxide cyclase activity ( $3.32 \times 10^{-2}$ )
	cytokinin dehydrogenase activity ( $4.98 \times 10^{-2}$ )
17	transcription factor activity ( $3.15 \times 10^{-2}$ )
18	response to chitin ( $2.17 \times 10^{-4}$ )
	response to organic substance ( $2.95 \times 10^{-3}$ )
	defense response to virus ( $7.87 \times 10^{-3}$ )
	response to wounding ( $1.68 \times 10^{-2}$ )
	NAD+ ADP-ribosyltransferase activity ( $4.88 \times 10^{-2}$ )
19	sphingolipid delta-4 desaturase activity ( $1.53 \times 10^{-2}$ )
20	cellular response to sucrose starvation ( $4.05 \times 10^{-3}$ )
	aromatic amino acid transmembrane transporter activity ( $6.64 \times 10^{-3}$ )
	asparagine synthase (glutamine-hydrolyzing) activity ( $9.96 \times 10^{-3}$ )
	sinapate 1-glucosyltransferase activity ( $1.33 \times 10^{-2}$ )
	NAD+ ADP-ribosyltransferase activity ( $1.99 \times 10^{-2}$ )
	fatty acid (omega-1)-hydroxylase activity ( $2.32 \times 10^{-2}$ )
	neutral amino acid transmembrane transporter activity ( $2.65 \times 10^{-2}$ )
	response to fructose stimulus ( $4.45 \times 10^{-2}$ )
	pyruvate kinase activity ( $4.64 \times 10^{-2}$ )
	response to absence of light ( $4.85 \times 10^{-2}$ )
21	zinc ion binding ( $1.21 \times 10^{-3}$ )
	cation binding ( $1.31 \times 10^{-2}$ )
	metal ion binding ( $2.07 \times 10^{-2}$ )
22	prephenate dehydratase activity ( $8.15 \times 10^{-3}$ )
	arogenate dehydratase activity ( $8.15 \times 10^{-3}$ )
	beta-amylase activity ( $1.22 \times 10^{-2}$ )
	response to wounding ( $3 \times 10^{-2}$ )
	L-phenylalanine biosynthetic process ( $4.64 \times 10^{-2}$ )
23	response to wounding ( $2.34 \times 10^{-7}$ )
	response to jasmonic acid stimulus ( $1.56 \times 10^{-4}$ )
	jasmonate O-methyltransferase activity ( $1.05 \times 10^{-2}$ )
	jasmonic acid biosynthetic process ( $1.46 \times 10^{-2}$ )
	oxylin metabolic process ( $1.85 \times 10^{-2}$ )
	defense response ( $2.18 \times 10^{-2}$ )
	jasmonic acid mediated signaling pathway ( $2.45 \times 10^{-2}$ )
	1,2-diacylglycerol 3-beta-galactosyltransferase activity ( $3.15 \times 10^{-2}$ )
24	response to water deprivation ( $3.18 \times 10^{-6}$ )
	protein serine/threonine phosphatase complex ( $1.97 \times 10^{-5}$ )
	response to endogenous stimulus ( $1.75 \times 10^{-4}$ )
	negative regulation of abscisic acid mediated signaling ( $3.42 \times 10^{-4}$ )

	negative regulation of cell communication ( $4.97 \times 10^{-4}$ )
	protein serine/threonine phosphatase activity ( $8.45 \times 10^{-4}$ )
	protein amino acid dephosphorylation ( $1.90 \times 10^{-3}$ )
	phosphatase activity ( $9.75 \times 10^{-3}$ )
	response to abiotic stimulus ( $1.11 \times 10^{-2}$ )
25	trans-zeatin O-beta-D-glucosyltransferase activity ( $1.01 \times 10^{-3}$ )
	cis-zeatin O-beta-D-glucosyltransferase activity ( $1.01 \times 10^{-3}$ )
	glucuronosyltransferase activity ( $1.41 \times 10^{-3}$ )
	UDP-glycosyltransferase activity ( $1.75 \times 10^{-2}$ )
	glucosyltransferase activity ( $2.05 \times 10^{-2}$ )
	transferase activity ( $3.09 \times 10^{-2}$ )
26	glutamate dehydrogenase activity ( $2.27 \times 10^{-3}$ )
	glutamate dehydrogenase [NAD(P)+] activity ( $4.53 \times 10^{-3}$ )
	nitrate reductase activity ( $4.53 \times 10^{-3}$ )
	nitric oxide biosynthetic process ( $1.64 \times 10^{-2}$ )
	ER body ( $1.72 \times 10^{-2}$ )
	nitrate assimilation ( $3.28 \times 10^{-2}$ )
27	secondary metabolic process ( $1.54 \times 10^{-3}$ )
28	
29	acyl-[acyl-carrier-protein] hydrolase activity ( $1.99 \times 10^{-2}$ )
	bis(5'-adenosyl)-pentaphosphatase activity ( $2.99 \times 10^{-2}$ )
	cell plate formation involved in plant-type cell wall biogenesis ( $4.1 \times 10^{-2}$ )
	para-aminobenzoic acid metabolic process ( $4.1 \times 10^{-2}$ )