

Cluster	GO term (p-value)
1	
2	C-22 sterol desaturase activity ( $1.40 \times 10^{-2}$ )
	detection of fungus ( $2.34 \times 10^{-2}$ )
3	cytidine deaminase activity ( $3.51 \times 10^{-3}$ )
	response to singlet oxygen ( $4.58 \times 10^{-3}$ )
	nucleoside catabolic process ( $6.11 \times 10^{-3}$ )
	cytidine deamination ( $6.11 \times 10^{-3}$ )
	defense response signaling pathway, resistance gene-independent ( $6.11 \times 10^{-3}$ )
	cytidine metabolic process ( $6.11 \times 10^{-3}$ )
	pyrimidine ribonucleoside catabolic process ( $6.11 \times 10^{-3}$ )
	pyrimidine nucleoside metabolic process ( $7.63 \times 10^{-3}$ )
	defense response signaling pathway, resistance gene-dependent ( $8.4 \times 10^{-3}$ )
	response to stress ( $1.10 \times 10^{-2}$ )
	ribonucleoside metabolic process ( $1.22 \times 10^{-2}$ )
	intrinsic to endoplasmic reticulum membrane ( $1.22 \times 10^{-2}$ )
	magnesium ion binding ( $1.25 \times 10^{-2}$ )
	activation of immune response ( $1.68 \times 10^{-2}$ )
	positive regulation of immune system process ( $1.68 \times 10^{-2}$ )
	positive regulation of innate immune response ( $1.68 \times 10^{-2}$ )
	systemic acquired resistance ( $2.06 \times 10^{-2}$ )
	regulation of immune response ( $2.06 \times 10^{-2}$ )
	plant-type hypersensitive response ( $2.36 \times 10^{-2}$ )
	positive regulation of response to stimulus ( $3.20 \times 10^{-2}$ )
	monooxygenase activity ( $3.26 \times 10^{-2}$ )
	hydrolase activity, acting on carbon-nitrogen (but not peptide) bonds ( $3.37 \times 10^{-2}$ )
	regulation of defense response ( $3.5 \times 10^{-2}$ )
	microsome ( $3.67 \times 10^{-2}$ )
	membrane fraction ( $4.54 \times 10^{-2}$ )
4	
5	protein serine/threonine phosphatase complex ( $9.9 \times 10^{-6}$ )
	protein serine/threonine phosphatase activity ( $1.79 \times 10^{-5}$ )
	protein amino acid dephosphorylation ( $6.12 \times 10^{-4}$ )
	phosphatase activity ( $8.16 \times 10^{-4}$ )
	guanosine tetraphosphate metabolic process ( $3.56 \times 10^{-3}$ )
	hydrolase activity, acting on ester bonds ( $5.29 \times 10^{-3}$ )
	purine ribonucleoside metabolic process ( $1.24 \times 10^{-2}$ )
	negative regulation of abscisic acid mediated signaling ( $4.54 \times 10^{-2}$ )
6	response to insect ( $2.04 \times 10^{-3}$ )
	jasmonic acid and ethylene-dependent systemic resistance ( $6.71 \times 10^{-3}$ )
	response to starvation ( $8.33 \times 10^{-3}$ )
	response to extracellular stimulus ( $1.16 \times 10^{-2}$ )
	response to ethylene stimulus ( $2.64 \times 10^{-2}$ )
	response to jasmonic acid stimulus ( $2.64 \times 10^{-2}$ )
	response to external stimulus ( $2.69 \times 10^{-2}$ )

	innate immune response ( $3.04 \times 10^{-2}$ )
	immune system process ( $3.28 \times 10^{-2}$ )
	calcium ion binding ( $3.98 \times 10^{-2}$ )
7	
8	autophagy ( $3.2 \times 10^{-2}$ )
9	lactoylglutathione lyase activity ( $1.02 \times 10^{-3}$ )
	response to sucrose stimulus ( $5.19 \times 10^{-3}$ )
	aging ( $1.05 \times 10^{-2}$ )
	response to carbohydrate stimulus ( $1.08 \times 10^{-2}$ )
	endomembrane system ( $1.58 \times 10^{-2}$ )
	lyase activity ( $4.53 \times 10^{-2}$ )
	hydrolase activity, hydrolyzing O-glycosyl compounds ( $4.98 \times 10^{-2}$ )
10	cellular response to sucrose starvation ( $2.44 \times 10^{-3}$ )
	asparagine synthase (glutamine-hydrolyzing) activity ( $3.07 \times 10^{-3}$ )
	water homeostasis ( $9.77 \times 10^{-3}$ )
	acyl carrier activity ( $1.13 \times 10^{-2}$ )
	cellular potassium ion homeostasis ( $1.22 \times 10^{-2}$ )
	response to absence of light ( $2.68 \times 10^{-2}$ )
	monovalent inorganic cation homeostasis ( $2.68 \times 10^{-2}$ )
	sodium:hydrogen antiporter activity ( $3.26 \times 10^{-2}$ )
	solute:hydrogen antiporter activity ( $4.99 \times 10^{-2}$ )
11	immune system process ( $6.89 \times 10^{-5}$ )
	drug transporter activity ( $7.76 \times 10^{-4}$ )
	negative regulation of defense response ( $8.52 \times 10^{-4}$ )
	plasma membrane ( $1.81 \times 10^{-2}$ )
	auxin efflux ( $1.96 \times 10^{-2}$ )
	xenobiotic-transporting ATPase activity ( $2.54 \times 10^{-2}$ )
	multidrug efflux pump activity ( $2.54 \times 10^{-2}$ )
	ATPase activity ( $3.2 \times 10^{-2}$ )
	response to humidity ( $3.91 \times 10^{-2}$ )
	positive regulation of cellular defense response ( $3.91 \times 10^{-2}$ )
	positive regulation of cell size ( $3.91 \times 10^{-2}$ )
12	sphingolipid delta-4 desaturase activity ( $2.68 \times 10^{-3}$ )
	methionine adenosyltransferase activity ( $1.07 \times 10^{-2}$ )
	positive regulation of anthocyanin metabolic process ( $1.59 \times 10^{-2}$ )
	S-adenosylmethionine biosynthetic process ( $3.18 \times 10^{-2}$ )
	double-stranded DNA binding ( $3.48 \times 10^{-2}$ )
	positive regulation of flavonoid biosynthetic process ( $3.97 \times 10^{-2}$ )
	lipid transporter activity ( $4.28 \times 10^{-2}$ )
13	NAD+ ADP-ribosyltransferase activity ( $1.17 \times 10^{-3}$ )
	oxygen and reactive oxygen species metabolic process ( $7.52 \times 10^{-3}$ )
	response to salt stress ( $4.01 \times 10^{-2}$ )
14	
15	endoplasmic reticulum ( $4.99 \times 10^{-8}$ )
	protein folding ( $3.96 \times 10^{-5}$ )
	ATP binding ( $1.49 \times 10^{-3}$ )

	adenyl nucleotide binding ( $1.80 \times 10^{-3}$ )
	purine ribonucleotide binding ( $3.19 \times 10^{-3}$ )
	nucleotide binding ( $7.03 \times 10^{-3}$ )
	regulation of meristem growth ( $1.57 \times 10^{-2}$ )
	protein secretion ( $1.71 \times 10^{-2}$ )
	regulation of meristem organization ( $1.99 \times 10^{-2}$ )
	endoplasmic reticulum lumen ( $2.07 \times 10^{-2}$ )
	regulation of growth ( $3.56 \times 10^{-2}$ )
	cytoplasm ( $4.26 \times 10^{-2}$ )
16	chloroplast thylakoid membrane ( $2.13 \times 10^{-5}$ )
	thylakoid membrane ( $2.74 \times 10^{-5}$ )
	plastid thylakoid ( $8.4 \times 10^{-5}$ )
	photosynthetic membrane ( $1.79 \times 10^{-4}$ )
	chloroplast ( $2.94 \times 10^{-4}$ )
	intracellular organelle part ( $2.81 \times 10^{-2}$ )
	cytoplasmic part ( $2.99 \times 10^{-2}$ )
17	autophagic vacuole ( $1.32 \times 10^{-2}$ )
	outward rectifier potassium channel activity ( $3.82 \times 10^{-2}$ )
	phosphatidylinositol-4,5-bisphosphate 5-phosphatase activity ( $4.36 \times 10^{-2}$ )
	autophagy ( $4.74 \times 10^{-2}$ )
18	nitrate reductase activity ( $7.8 \times 10^{-4}$ )
	prephenate dehydratase activity ( $2.34 \times 10^{-3}$ )
	arogenate dehydratase activity ( $2.34 \times 10^{-3}$ )
	nitric oxide biosynthetic process ( $4.28 \times 10^{-3}$ )
	L-phenylalanine biosynthetic process ( $8.55 \times 10^{-3}$ )
	nitrate assimilation ( $9.98 \times 10^{-3}$ )
	nitrogen compound metabolic process ( $2.00 \times 10^{-2}$ )
	defense response to fungus, incompatible interaction ( $2.14 \times 10^{-2}$ )
	defense response to bacterium, incompatible interaction ( $3.42 \times 10^{-2}$ )
	carbon-oxygen lyase activity ( $4.3 \times 10^{-2}$ )
19	jasmonate O-methyltransferase activity ( $1.27 \times 10^{-2}$ )
	6-phosphogluconolactonase activity ( $2.54 \times 10^{-2}$ )
	beta-carotene hydroxylase activity ( $2.54 \times 10^{-2}$ )
	1,2-diacylglycerol 3-beta-galactosyltransferase activity ( $3.8 \times 10^{-2}$ )
20	protein serine/threonine phosphatase activity ( $4.73 \times 10^{-3}$ )
21	extracellular matrix structural constituent ( $1.09 \times 10^{-2}$ )
	ubiquitin ligase complex ( $2.54 \times 10^{-2}$ )
	protein ubiquitination ( $3.24 \times 10^{-2}$ )
	extracellular matrix organization and biogenesis ( $3.28 \times 10^{-2}$ )
	peptide receptor activity ( $4.37 \times 10^{-2}$ )
22	flavonol biosynthetic process ( $7.68 \times 10^{-5}$ )
	caffeate O-methyltransferase activity ( $4.78 \times 10^{-3}$ )
	flavonoid metabolic process ( $1.24 \times 10^{-2}$ )
	pigment metabolic process ( $3.32 \times 10^{-2}$ )
	beta-amylase activity ( $4.29 \times 10^{-2}$ )
23	substrate-specific transmembrane transporter activity ( $1.25 \times 10^{-3}$ )

	cation transmembrane transporter activity ( $1.76 \times 10^{-3}$ )
	anion transport ( $6.96 \times 10^{-3}$ )
	transporter activity ( $1.71 \times 10^{-2}$ )
	electron carrier activity ( $2.47 \times 10^{-2}$ )
	localization ( $2.58 \times 10^{-2}$ )
	rhamnogalacturonan II biosynthetic process ( $3.66 \times 10^{-2}$ )
	UDP-xylosyltransferase activity ( $4.29 \times 10^{-2}$ )
	metal ion transmembrane transporter activity ( $4.61 \times 10^{-2}$ )
24	endomembrane system ( $1.57 \times 10^{-2}$ )
	protein ubiquitination ( $2.39 \times 10^{-2}$ )
	defense response to bacterium ( $2.48 \times 10^{-2}$ )
25	endomembrane system ( $1.62 \times 10^{-4}$ )
	electron carrier activity ( $2.58 \times 10^{-3}$ )
	kinase activity ( $5.23 \times 10^{-3}$ )
	defense response to bacterium, incompatible interaction ( $1.26 \times 10^{-2}$ )
	immune system process ( $2.57 \times 10^{-2}$ )
	positive regulation of biosynthetic process ( $4.46 \times 10^{-2}$ )
26	kinase activity ( $2.21 \times 10^{-4}$ )
	protein amino acid phosphorylation ( $3.04 \times 10^{-4}$ )
	oligopeptide transport ( $5.59 \times 10^{-4}$ )
	phosphate metabolic process ( $7.26 \times 10^{-4}$ )
	oligopeptide transporter activity ( $1.48 \times 10^{-3}$ )
	endomembrane system ( $4.22 \times 10^{-3}$ )
	protein modification process ( $8.92 \times 10^{-3}$ )
	transferase activity ( $2.23 \times 10^{-2}$ )
27	hydrogen peroxide-mediated programmed cell death ( $3.06 \times 10^{-3}$ )
	ADP-ribose diphosphatase activity ( $3.51 \times 10^{-3}$ )
	NAD binding ( $1.05 \times 10^{-2}$ )
28	urea transmembrane transporter activity ( $1.17 \times 10^{-3}$ )
	cyclic-nucleotide phosphodiesterase activity ( $2.34 \times 10^{-3}$ )
	isochorismate synthase activity ( $2.34 \times 10^{-3}$ )
	protein disulfide isomerase activity ( $4.68 \times 10^{-3}$ )
	salicylic acid biosynthetic process ( $8.55 \times 10^{-3}$ )
	solute:sodium symporter activity ( $1.05 \times 10^{-2}$ )
	phyloquinone biosynthetic process ( $1.43 \times 10^{-2}$ )
	tRNA splicing ( $1.71 \times 10^{-2}$ )
	cellular response to nitrogen starvation ( $1.71 \times 10^{-2}$ )
	vitamin K metabolic process ( $1.71 \times 10^{-2}$ )
	transporter activity ( $2.52 \times 10^{-2}$ )
	phosphate transport ( $3.42 \times 10^{-2}$ )
	intramolecular oxidoreductase activity ( $3.50 \times 10^{-2}$ )
	negative regulation of defense response ( $3.7 \times 10^{-2}$ )
	fat-soluble vitamin biosynthetic process ( $3.7 \times 10^{-2}$ )
	intramolecular transferase activity ( $4.07 \times 10^{-2}$ )
	quinone cofactor biosynthetic process ( $4.27 \times 10^{-2}$ )
29	glycerol kinase activity ( $1.95 \times 10^{-3}$ )

tryptophan catabolic process ( $1.14 \times 10^{-2}$ )  
biogenic amine catabolic process ( $1.14 \times 10^{-2}$ )  
indole derivative catabolic process ( $1.14 \times 10^{-2}$ )  
catabolic process ( $1.73 \times 10^{-2}$ )  
chitinase activity ( $2.73 \times 10^{-2}$ )  
camalexin biosynthetic process ( $2.85 \times 10^{-2}$ )  
response to microbial phytotoxin ( $3.42 \times 10^{-2}$ )  
indole phytoalexin metabolic process ( $3.42 \times 10^{-2}$ )  
phytoalexin biosynthetic process ( $3.42 \times 10^{-2}$ )  
glycerol catabolic process ( $3.99 \times 10^{-2}$ )  
response to molecule of bacterial origin ( $4.56 \times 10^{-2}$ )  
indoleacetic acid biosynthetic process ( $4.56 \times 10^{-2}$ )