

**Supplemental Table 2:** List of gene ontology terms categories grouped by the corresponding bin-codes.

**others**

biodegradation of xenobiotics  
cell cycle peptidylprolyl isomerase  
development unspecified  
transport metabolite transporters at the mitochondrial membrane  
oxidative pentose phosphate cycle  
photosynthesis lightreaction other electron carrier (ox/red) ferredoxin  
photosynthesis calvin cycle

**cell wall**

cell wall proteins  
cell wall degradation  
cell wall modification  
cell wall pectinesterases  
misc. invertase/pectin methylesterase inhibitor family protein  
misc. gluco-, galacto- and mannosidases alpha/beta-galactosidase

**metabolism**

lipid metabolism  
misc. protease inhibitor/seed storage/lipid transfer protein (LTP) family protein  
amino acid metabolism  
secondary metabolism simple phenols  
hormone metabolism auxin induced-regulated-responsive-activated  
major CHO metabolism degradation sucrose  
misc. nitrilases, nitrile lyases, berberine bridge enzymes, reticuline oxidases, troponine reductases  
nucleotide metabolism degradation  
nucleotide metabolism phosphotransfer and pyrophosphatases  
minor CHO metabolism  
glycolysis cytosolic branch  
tricarboxylic acid cycle / org transformation  
misc. acid and other phosphatases

**stress response**

stress biotic  
stress biotic PR-proteins  
misc. beta 1,3 glucan hydrolases  
stress abiotic unspecified  
misc. GDSL-motif lipase (biotic stress)

**redox**

redox thioredoxin  
redox ascorbate and glutathione

redox dismutases and catalases  
misc. plastocyanin-like  
misc. oxidases - copper, flavone etc  
misc. glutathione S transferases

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**peroxidases**

misc. peroxidases

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**DNA/RNA**

RNA processing ribonucleases  
RNA regulation of transcription unclassified  
DNA synthesis/chromatin structure

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**protein**

protein targeting secretory pathway unspecified  
protein degradation  
protein glycosylation alpha-1,3/1,6-mannosyl-glycoprotein-beta-1,2-N-acetylglucosaminyltransferase(GnT)

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**signalling**

signalling receptor kinases  
signalling calcium  
signalling MAP kinases  
signalling 14-3-3 proteins  
PLP2/4 (lipid acyl hydrolase activity) defence and signalling  
protein posttranslational modification kinase receptor like cytoplasmatic kinase VII

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**not assigned**

not assigned

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