

**Supplementary Table S5. Biological process, cellular component and molecular function categories in GO enrichment of CmoGS and CsaGS genes**

species	GO ID	Description	out	pvalue	p.adjust	Genes
pumpkin	GO:0005623	cell	7	0.237932	0.31715	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0005737	cytoplasm	7	0.003611	0.054167	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0044434	chloroplast part	2	0.102833	0.170895	CmoCh06G014450;CmoCh14G017140
	GO:0032991	macromolecular complex	2	0.700963	0.830088	CmoCh06G014450;CmoCh14G017140
	GO:0016020	membrane	2	0.824279	0.951092	CmoCh06G014450;CmoCh14G017140
	GO:0004356	glutamate-ammonia ligase activity	7	6.08E-25	5.47E-24	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0005524	ATP binding	7	5.33E-07	2.22E-06	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0043168	anion binding	7	4.53E-06	6.80E-06	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0017076	purine nucleotide binding	7	1.42E-06	2.62E-06	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0006542	glutamine biosynthetic process	7	1.13E-24	6.70E-23	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0044038	cell wall macromolecule biosynthetic process	7	1.21E-16	6.52E-16	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
cucumber	GO:1901566	organonitrogen compound biosynthetic process	7	1.25E-07	2.53E-07	CmoCh01G003900;CmoCh06G014450;CmoCh08G004920;CmoCh14G008450;CmoCh14G017140;CmoCh15G007570;CmoCh17G009640
	GO:0009399	nitrogen fixation	3	1.53E-10	4.51E-10	CmoCh08G004920;CmoCh15G007570;CmoCh17G009640
	GO:0009735	response to cytokinin	2	0.000792	0.001113	CmoCh06G014450;CmoCh14G017140
	GO:0005623	cell	4	0.409576	0.574511	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
	GO:0005737	cytoplasm	4	0.037778	0.415781	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
	GO:0044434	chloroplast part	1	0.281478	0.449357	Csa3G150160
	GO:0032991	macromolecular complex	1	0.744862	0.882074	Csa3G150160
	GO:0016020	membrane	1	0.855697	0.979854	Csa3G150160
	GO:0004356	glutamate-ammonia ligase activity	4	2.33E-14	2.1E-13	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
	GO:0005524	ATP binding	4	0.000277	0.000851	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
	GO:0043168	anion binding	4	0.000949	0.001423	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
	GO:0017076	purine nucleotide binding	4	0.000492	0.000851	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
	GO:0006542	glutamine biosynthetic process	4	3.26E-14	1.92E-12	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690

GO:0044038	cell wall macromolecule biosynthetic process	4	7.13E-10	4.21E-09	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
GO:1901566	organonitrogen compound biosynthetic process	4	9.84E-05	0.0002	Csa3G150160;Csa3G304140;Csa5G410730;Csa7G420690
GO:0009399	nitrogen fixation	2	7.47E-08	2.75E-07	Csa5G410730;Csa7G420690
GO:0009735	response to cytokinin	1	0.021909	0.030062	Csa3G150160

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