

**Supplementary Table S2. Amino acid composition of CmoGS and CsaGS proteins**

ID	Type	pI	(average):	length	GRAVY	index	localization	Molecular	Amino	Predicted						
								weight	acid	Instability	subcellular					
								<b>Amino acid composition</b>								
CmoCh08G004920	GS1	6.32	42132.78	387	-0.187	36.92	cytosol	MNCLELGFSLSDAVLLSRLFCRLLSHQAPFHFNASLSLSSLSSFAPAFSSASLAMSLSDLINLNLTSTDKIIAEYYWIGGSGDLRSKARTLPGVTDPAKLPKWNYDG	GAHTNYSTKSMRNDGGIDVIKKAIKEKLGLRHKLHIAAYGEGNERRLTGRHETADINTFSWGVANRGASVRVGRDTEQAGKGKLL							
CmoCh14G017140	GS2	6.48	47702	432	-0.408	45.01	chloroplast	MAQILAPSQWQLRTKQTMSASSITPKMWSSLLKQSSKVAVKSSAKFRVLALKSDGSTINRMEELLNLDVTPYTDKIIAEYIWIGGSGIDLRSKSRTISKPV	EHPSELPKWN	GAGCHTNYSTKSMREEGGFVDVIKKAILNLSLRHNEHISAYGEGNERRLTGKHETASINTFSWGVANRGCSIRVRDTEKQGKGYLEDRRPASNMDPYVVTSLAETTLLWE						
CmoCh15G007570	GS1	5.88	39328.3	356	-0.427	40.78	cytosol	MSSLSDLINLSCDYTDKVIAEYIWVGGSKGDKVRSKARTISEYVSDPSKLPKWNYDGSSGTQAGGEDSEVILYPQAIFRDPFRRGNNILVICDSYTPAGEPIPTNK	RHAAKIFS	LWGVanRGASIRVRDTEKSGKGYFEDRRPASNMDPYVTSMIAETTILWKP						
CmoCh01G003900	GS1	5.53	37572.43	340	-0.376	41.84	cytosol	MSVSLSDLVNLDSLSDTDKVIAEYIWIGGSGMDLRSKARTLCGPVSDPSDVPKWSYDGSSGTQASGEDSEVILYPQAIFRDPFRRGNNILVLCDAYTAAGEPIPTNK	RDAAKIFS	RDTEKKKGKGYFEDRRLPSNMMDPYVATAMIAETTILWKP						
CmoCh17G009640	GS1	6.33	41914.05	381	-0.438	38.63	cytosol	MSLSDLINLNLTDTTEKIIAEYYWIGGSGDLRSKARTLPGVTDPAKLPKWNYDGSSTNQATGDNSEVILHPQAVFKDPFRRGNNILVMCDAYTSAGEPIPTNTRFNAK	I	MSLSDLINLNLTDTTEKIIAEYYWIGGSGDLRSKARTLPGVTDPAKLPKWNYDGSSTNQATGDNSEVILHPQAVFKDPFRRGNNILVMCDAYTSAGEPIPTNTRFNAK						
CmoCh06G014450	GS2	8.28	52968.5	479	-0.311	45.91	chloroplast	MVVGSSLYLYPAIFIPLFFIRHYRRRNPLLGLFLPLSGTSLVQEMAQILAPSTQCQLRTKQSSMGGSPITPKMWSSLMKQSKKGGVKSSAKFRVLALKSDGSTINRMED		EFQVGPSVGIEAGDHIWCARYILERITEQAGVVLSLDPKPIEGDWNGAGCHTNYSTKSMREEGFEVIKKAILNLSLRHKEHISAYGEGNERRLTGKHETASINSFSWGVANF						
CmoCh14G008450	GS1	5.7	39244.13	356	-0.436	38.52	cytosol	MSLSDLVNLDSLSDTEKIIAEYYWIGGSGMDLRSKARTLGPVSDPSKLPKWNYDGSSGTQAGKDSEVILHPQAI	FRDPFRRGNNILVVCDAYTPAGEPIPTNK	RHAAKIFS	MSLSDLVNLDSLSDTEKIIAEYYWIGGSGMDLRSKARTLGPVSDPSKLPKWNYDGSSGTQAGKDSEVILHPQAI	FRDPFRRGNNILVVCDAYTPAGEPIPTNK				
Csa3G150160	GS2	7.62	47777.19	432	-0.434	46.09	chloroplast	MAQILAPSTQWQLRTKLPMSSSPITPKMWSSLKQNKKGAVKSSSKYRVLVRSEGGTINRMEDLLNLDVTPYTDKIIAEYIWIGGSGIDLRSKSRTISKPV	EHPSELPKWN	AGCHTNYSTKSMREEGFEVIKKAILNLSLRHKEHISAYGEGNERRLTGKHETASINTFSWGVANRGCSIRVRDTEKQGKGYLEDRRPASNMDPYVVTSLAETTLLWE						
Csa3G304140	GS1	5.82	39276.32	356	-0.403	41.35	cytosol	MSLSDLINLNLTDTTEKIIAEYYWIGGSGDLRSKARTLGPVSDPSKLPKWNYDGSSGTQAGKDSEVILHPQAI	FRDPFRRGNNILVVCDAYTPAGEPIPTNK	RHAAKIFS	MSLSDLINLNLTDTTEKIIAEYYWIGGSGDLRSKARTLGPVSDPSKLPKWNYDGSSGTQAGKDSEVILHPQAI	FRDPFRRGNNILVVCDAYTPAGEPIPTNK				
Csa5G410730	GS1	5.59	39066.87	356	-0.419	39.02	cytosol	FLWGVANRGASIRVRDTEKAGKGYFEDRRPASNMDPYVVTSMIAETTILWNP		MSLSDLINLNLTDTTEKIIAEYYWIGGSGDLRSKARTLGPVSDPSKLPKWNYDGSSGTQAGKDSEVILHPQAI	FRDPFRRGNNILVVCDAYTPAGEPIPTNK					
Csa7G420690	GS1	5.77	39118.04	356	-0.442	41.13	cytosol	TFSWGVANRGASIRVRDTEKAGKGYFEDRRPASNMDPYVVTSMIAETTILGKP		MSLSDLINLNLTDTTEKIIAEYYWIGGSGDLRSKARTLGPVSDPSKLPKWNYDGSSGTQAGKDSEVILHPQAI	FRDPFRRGNNILVVCDAYTPAGEPIPTNK					

