

Additional file 8: Table S3. The details of sequences used in the phylogenetic relationship analysis.

Species	Gene name	Locus ID	Transcript name	Protein NCBI ID
<i>Arabidopsis thaliana</i> ¹	<i>AtCSD1</i>	AT1G08830	AT1G08830.1	NP_172360
	<i>AtCSD2</i>	AT2G28190	AT2G28190.1	NP_565666
	<i>AtCSD3</i>	AT5G18100	AT5G18100.1	NP_197311
	<i>AtMSD1</i>	AT3G10920	AT3G10920.1	NP_187703
	<i>AtMSD2</i>	AT3G56350	AT3G56350.1	NP_191194
	<i>AtFSD1</i>	AT4G25100	AT4G25100.1	NP_194240
	<i>AtFSD2</i>	AT5G51100	AT5G51100.1	NP_199923
	<i>AtFSD3</i>	AT5G23310	AT5G23310.1	NP_197722
<i>Amborella trichopoda</i> ²	<i>AmtCSD1</i>	LOC18445195	XM_011629099.1	XP_011627401
	<i>AmtCSD2</i>	LOC18448821	XM_011630490.1	XP_011628792
	<i>AmtCSD3</i>	LOC18428583	XM_006837899.2	XP_006837962
	<i>AmtMSD1</i>	LOC18432270	XM_011624339.1	XP_011622641
	<i>AmtFSD1</i>	LOC18429084	XM_011623380.1	XP_011621682
	<i>AmtFSD2</i>	LOC18445372	XM_011629184.1	XP_011627486
<i>Brachypodium distachyon</i> ¹	<i>BdCSD1</i>	Bradi1g18340	Bradi1g18340.1	XP_003562484
	<i>BdCSD2</i>	Bradi1g69680	Bradi1g69680.1	XP_003558478
	<i>BdCSD3</i>	Bradi3g43070	Bradi3g43070.1	XP_003574947
	<i>BdMSD1</i>	Bradi2g30580	Bradi2g30580.1	XP_003568674
	<i>BdFSD1</i>	Bradi1g50550	Bradi1g50550.1	XP_003561161
	<i>BdFSD2</i>	Bradi1g51140	Bradi1g51140.1	XP_003557205
<i>Chlamydomonas reinhardtii</i> ²	<i>CrMSD1</i>	MSD1	XM_001700006.1	XP_001700058
	<i>CrMSD2</i>	MSD2	XM_001699025.1	XP_001699077
	<i>CrMSD3</i>	MSD3	XM_001695895.1	XP_001695947
	<i>CrMSD4</i>	MSD4	XM_001690884.1	XP_001690936
	<i>CrMSD5</i>	MSD5	XM_001691696.1	XP_001691748
	<i>CrFSD1</i>	FSD1	XM_001690539.1	XP_001690591
<i>Gossypium arboreum</i> ³	<i>GaCSD1</i>	Cotton_A_21978	FJ222550.1	ACI46676
	<i>GaCSD2</i>	Cotton_A_24238	JRRC01475755.1	KHG07500
	<i>GaCSD3</i>	Cotton_A_30467	JRRC01403715.1	KHG04013
	<i>GaCSD4</i>	Cotton_A_32487	EF123067.1	ABL63518
	<i>GaCSD5</i>	Cotton_A_36793	KN396107.1	KHG11568
	<i>GaMSD1</i>	Cotton_A_04050	JRRC01430423.1	KHG05444
	<i>GaMSD2</i>	Cotton_A_21263	KN395990.1	KHG11516
	<i>GaFSD1</i>	Cotton_A_03623	KN429884.1	KHG24725
<i>GaFSD2</i>	Cotton_A_26478	KN444093.1	KHG28218	

<i>Gossypium raimondii</i> ²	<i>GrCSD1</i>	LOC105782588	XM_012607416.1	XP_012462870	
			XM_012607417.1	XP_012462871	
			XM_012607418.1	XP_012462872	
	<i>GrCSD2</i>	LOC105783575	XM_012609115.1	XP_012464569	
	<i>GrCSD3</i>	LOC105804461	XM_012637105.1	XP_012492559	
			XM_012637104.1	XP_012492558	
	<i>GrCSD4</i>	LOC105799144	XM_012629546.1	XP_012485000	
	<i>GrCSD5</i>	LOC105768981	XM_012589298.1	XP_012444752	
	<i>GrMSD1</i>	LOC105770420	XM_012591617.1	XP_012447071	
	<i>GrMSD2</i>	LOC105777435	XM_012600706.1	XP_012456160	
	<i>GrFSD1</i>	LOC105785559	XM_012611674.1	XP_012467128	
			XM_012611682.1	XP_012467136	
			XM_012611667.1	XP_012467121	
	<i>GrFSD2</i>	LOC105782623	XM_012607482.1	XP_012462936	
			XM_012607481.1	XP_012462935	
		XM_012607480.1	XP_012462934		
<i>Glycine max</i> ¹	<i>GmCSD1</i>	Glyma.19G240400	Glyma.19G240400.1	NP_001235298	
	<i>GmCSD2</i>	Glyma.03G242900	Glyma.03G242900.1	NP_001235936	
	<i>GmCSD3</i>	Glyma.16G153900	Glyma.16G153900.1	NP_001242811	
	<i>GmCSD4</i>	Glyma.11G192700	Glyma.11G192700.1	XP_003538169	
	<i>GmCSD5</i>	Glyma.12G081300	Glyma.12G081300.1	XP_003539793	
	<i>GmCSD6</i>	Glyma.12G178800	Glyma.12G178800.1	NP_001238038	
	<i>GmMSD1</i>	Glyma.06G144500	Glyma.06G144500.1	XP_003526813	
	<i>GmMSD2</i>	Glyma.04G221300	Glyma.04G221300.1	NP_001235066	
	<i>GmFSD1</i>	Glyma.02G087700	Glyma.02G087700.1	XP_003518624	
	<i>GmFSD2</i>	Glyma.20G196900	Glyma.20G196900.1	NP_001238486	
	<i>GmFSD3</i>	Glyma.10G193500	Glyma.10G193500.1	NP_001237901	
	<i>GmFSD4</i>	Glyma.20G050800	Glyma.20G050800.1	XP_003555663	
	<i>GmFSD5</i>	Glyma.10G117100	Glyma.10G117100.1	XP_003535933	
	<i>Oryza sativa</i> ¹	<i>OsCSD1</i>	LOC_Os03g22810	LOC_Os03g22810.1	ABF95937
		<i>OsCSD2</i>	LOC_Os03g11960	LOC_Os03g11960.1	ABF94673
<i>OsCSD3</i>		LOC_Os07g46990	LOC_Os07g46990.1	P28757	
<i>OsCSD4</i>		LOC_Os08g44770	LOC_Os08g44770.1	P93407	
<i>OsMSD1</i>		LOC_Os05g25850	LOC_Os05g25850.1	Q43008	
<i>OsFSD1</i>		LOC_Os06g02500	LOC_Os06g02500.1	Q5VRL3	
<i>OsFSD2</i>		LOC_Os06g05110	LOC_Os06g05110.1	Q5VSB7	

<i>Physcomitrella patens</i> ¹	<i>PpCSD1</i>	Pp3c24_4100	Pp3c24_4100.1	XP_001755582
	<i>PpCSD2</i>	Pp3c9_25690	Pp3c9_25690.1	XP_001770912
	<i>PpCSD3</i>	Pp3c9_24840	Pp3c9_24840.1	XP_001770943
	<i>PpMSD1</i>	Pp3c19_10240	Pp3c19_10240.1	XP_001774291
	<i>PpFSD1</i>	Pp3c7_19790	Pp3c7_19790.1	XP_001751975
	<i>PpFSD2</i>	Pp3c2_27440	Pp3c2_27440.1	XP_001756362
<i>Populus trichocarpa</i> ¹	<i>PtCSD1</i>	Potri.004G216700	Potri.004G216700.1	XP_006384962
	<i>PtCSD2</i>	Potri.009G005100	Potri.009G005100.1	XP_006378938
	<i>PtCSD3</i>	Potri.013G056900	Potri.013G056900.1	XP_002319157
	<i>PtCSD4</i>	Potri.019G035800	Potri.019G035800.1	XP_002325843
	<i>PtCSD5</i>	Potri.005G044400	Potri.005G044400.1	XP_006382702
	<i>PtCSD6</i>	Potri.013G031100	Potri.013G031100.1	XP_002319589
	<i>PtMSD1</i>	Potri.019G057300	Potri.019G057300.1	XP_002325924
	<i>PtMSD2</i>	Potri.013G092600	Potri.013G092600.1	XP_002319332
	<i>PtFSD1</i>	Potri.005G089600	Potri.005G089600.1	XP_002307154
	<i>PtFSD2</i>	Potri.012G112300	Potri.012G112300.1	XP_006376943
	<i>PtFSD3</i>	Potri.015G110400	Potri.015G110400.1	XP_002322315
	<i>Sorghum bicolor</i> ¹	<i>SbCSD1</i>	Sobic.007G166600	Sobic.007G166600.1
<i>SbCSD2</i>		Sobic.001G453800	Sobic.001G453800.1	XP_002465634
<i>SbCSD3</i>		Sobic.001G371900	Sobic.001G371900.1	
<i>SbCSD4</i>		Sobic.002G407900	Sobic.002G407900.1	
<i>SbMSD1</i>		Sobic.009G093200	Sobic.009G093200.1	XP_002439542
<i>SbFSD1</i>		Sobic.010G012900	Sobic.010G012900.1	XP_002437717
<i>SbFSD2</i>		Sobic.010G033000	Sobic.010G033000.1	XP_002436456

¹, protein sequences were retrieved from the Joint Genome Institute (JGI) (<http://www.phytozome.net>)

², protein sequences were retrieved from the NCBI protein database (<http://www.ncbi.nlm.nih.gov/protein/>)

³, protein sequences were retrieved from CottonGen (<https://www.cottongen.org/data/genome>)