

Supplemental Table 3. Proteins identified from a 1-dimensional gel with purified thylakoids from wt and clpr2-1 . Proteins were identified by nanoLCESI-MS/MS.

gel band #	apparent mass (kDa)	Accession number ^(a)	ambiguity ^(b)	lab annotation ^(c)	Calc. MW ^(d)	Calc.MW (-cTP) ^(e)	Mowse Score ^(f)	# matching peptides ^(g)	highest peptide score ^(h)	comment	
1w	40	At5g66190		FNR-1	40.3	33.6	312	5	95		
		At4g04640		CF1g - atpC	40.9	36.5	280	5	78		
		At1g20020		FNR-2	41.2	35.3	168	3	61		
		AtCg00280		psbC CP43	51.9	p-enc	141	4	50		
1r	40	At4g04640		CF1g - atpC	40.9	36.5	118	3	50		
2w	33	At3g50820		psbO OEC33-like	35.0	32.1	514	12 (1)	85	3 unique peptides	
		At5g66570		psbO OEC33	35.1	32.2	481	12 (1)	85		
2r	33	At3g08940.2		LHCII-4.2 - CP29	31.2	27.2	57	2	40		
		At5g66570		psbO OEC33	35.1	32.2	364	10 (1)	70		
		At3g50820		psbO OEC33-like	35.0	32.1	315	8 (1)	70	1 unique peptide score 50	
		At3g23400		fibrillin	30.5	22.9	122	3	48		
3w	32	At5g01530		LHCII-4.1-CP29	31.1	27.3	79	3	30		
		At3g08940.2		LHCII-4.2 - CP29	31.2	27.2	162	4 (1)	47		
		At5g01530		LHCII-4.1-CP29	31.1	27.3	98	2	71	1 unique peptide score 71	
3r	32	At4g10340		LHCII-5 - CP26	30.2	25.2	173	5	56		
		At1g29930		LHCII-1.3	28.2	26.1	126	3	61	cTP-peptide score 32	
		At2g34420	At2g34430; At1g29930	LHCII-1.5	28.1	24.4	94	2	61		
		At2g34430	At2g34420; At1g29930	LHCII-1.4	28.2	26.0					
4w	30	At5g01530		LHCII-4.1-CP29	31.1	27.3	285	9 (3)	74		
		At3g08940.2		LHCII-4.2 - CP29	31.2	27.2	258	7 (2)	60		
		At4g10340		LHCII-5 - CP26	30.2	25.2	191	7 (1)	49		
		AtCg00270		psbD D2	39.5	p-enc	93	2	69		
		AtCg00020		psbA D1	38.9	p-enc	80	3	46		
		⁽ⁱ⁾ LhcII-1						74	3	32	
4r	30	At1g29910	At1g29920	LHCII-1.1	28.2	26.1	312	7 (2)	118	cTP-peptide score 75, 2 charge states	
		At1g29920	At1g29910	LHCII-1.2	28.2	26.1					
		At2g34430		LHCII-1.4	28.2	26.0	308	7 (2)	118	cTP-peptide score 62	
		At1g29930		LHCII-1.3	28.2	26.1	308	7 (2)	118	cTP-peptide score 70	
		At2g34420		LHCII-1.5	28.1	24.4	277	7 (2)	118	cTP-peptide score 31	
		At5g01530		LHCII-4.1-CP29	31.1	27.3	256	6 (2)	79		
		At4g10340		LHCII-5 - CP26	30.2	25.2	250	7 (1)	58		
		At3g08940.2		LHCII-4.2 - CP29	31.2	27.2	220	6 (1)	59		
		^(k) LhcII-2						212	6 (2)	118	
		At5g54270		LHCII-3	28.7	26.4	141	3 (1)	118	cTP-peptide score 23	
		AtCg00020		psbA D1	38.9	p-enc	109	3	47		
		At5g66570		psbO OEC33	35.1	32.2	80	2	47		
At2g37220		RNA binding protein CP29 B'	30.7	26.0	49	2	25				
5w	28	At4g10340		LHCII-5 - CP26	30.2	25.2	369	8 (1)	100		
		At5g01530		LHCII-4.1-CP29	31.1	27.3	141	3	59		
		⁽ⁱ⁾ LhcII-1						130	2	78	
		^(k) LhcII-2						106	2	78	
		At1g61520		LHCI-3 - LHCI-680A CAB4	29.2	24.4	77	1	77		
		At1g03130	At4g02770	psaD-1 subunit II	22.3	17.7	72	2	52		
5r	28	At4g02770	At1g03130	psaD-2 subunit II	22.6	17.9					
		At1g29930		LHCII-1.3	28.2	26.1	235	5 (1)	90	cTP-peptide score 69	
		At1g29910	At1g29920	LHCII-1.1	28.2	26.1	228	5 (1)	90	cTP-peptide score 62	
		At1g29920	At1g29910	LHCII-1.2	28.2	26.1					
		At2g34430		LHCII-1.4	28.2	26.0	222	5 (1)	90	cTP-peptide score 56	
		At4g10340		LHCII-5 - CP26	30.2	25.2	211	5	57		
		At5g54270		LHCII-3	28.7	26.4	113	3 (1)	90		
		At1g61520		LHCI-3 - LHCI-680A CAB4	29.2	24.4	79	1	69		
		At3g50820	At5g66570	psbO OEC33-like	35.0	32.1	72	2	37		
At5g66570	At3g50820	psbO OEC33	35.1	32.2							
At5g01530		LHCII-4.1-CP29	31.1	27.3	68	2	47				
6w	20	⁽ⁱ⁾ LhcII-family					101	1	101		
		At3g47470		LHCI-4 - LHCI-730	27.7	22.6	69	3 (1)	39		
		At1g44575		psbS	28.0	21.6	57	1	57		

7w	18	At4g21280	psbQ OEC16	23.8	19.4	261	7 (1)	74	unique peptide score 16		
		At4g05180	psbQ OEC16-like	24.6	19.7	252	9 (3)	53			
		AtCg00130	CFO-I - atpF	21.1	p-enc	153	4	45			
		At4g28750	psaE-1 subunit IV	23.8	19.4	90	3	38			
		AtCg00720	petB - Cytochrome b6	24.2	p-enc	68	2 (1)	52			
		At1g31330	psaF- subunit III	24.2	20.7	62	3	30			
		At3g54890	LHCI-1-1 - LHCI-730	26.0	22.5	49	2	27			
7r	18	At4g12800	psaL - subunit XI (also named V)	23.1	18.0	44	2	25			
		At4g21280	psbQ OEC16	23.8	19.4	156	4	48			
		At4g05180	psbQ OEC16-like	24.6	19.7	124	3	64			
		At1g31330	psaF- subunit III	24.2	20.7	57	1	46			
		AtCg00720	petB - Cytochrome b6	24.2	p-enc	39	1	39			
		8w	17	At4g28750	psaE-1 subunit IV	15.0	10.5	130		2	73
				At2g20260	psaE-2 subunit IV	15.2	10.6	102		1	73
At1g31330	psaF- subunit III			24.2	20.7	63	2	35			
AtCg00130	CFO-I - atpF			21.1	p-enc	38	1	34			
8r	17	⁽ⁱ⁾ LHCII-family				85	1	85			
		AtCg00720	petB - Cytochrome b6	24.2	p-enc	38	1	38			
9w	10-11	At1g52230	psaH-2 - subunit VI	15.3	10.8	95	2	54			
		At1g55670	psaG - subunit V	17.1	11.1	54	2	30			
		At5g64040	psaN	18.4	10.1	49	1	34			
9r	10-11	⁽ⁱ⁾ LHCII-family				86	1	86			
		At3g16140	psaH-1 - subunit VI	15.2	10.9	55	1	21			

- a Accession number from TAIR (www.arabidopsis.org)
- b Boxed identifications, or reported as LhcII-family, LhcII-1, or LhcII-2 (see below) are ambiguous with the reported accession numbers
- c Annotation curated by the van Wijk laboratory, based on primary literature, TAIR, and functional domain predictors
- d,e Calculated molecular mass in kDa of the unprocessed and processed protein (after removal of the predicted cTP) - p-enc: plastid encoded protein
- f Mowse score of identification (from Mascot)
- g Number of relevant matching peptides (Number of peptides with different charge state or oxidated Methionine matching to the same sequence). Peptides have score ≥ 20 and rank 1.
- h Maximum recorded peptide score (from Mascot)
- i LhcII family - ambiguous hit for LHCII-1.1 (At1g29910), LHCII-1.2 (At1g29920), LHCII-1.3 (At1g29930), LHCII-1.4 (At2g34430), LHCII-1.5 (At2g34420), LHCII-2.1 (At2g05100), LHCII-2.2 (At2g05070), LHCII-2.4 (At3g27690), LHCII-3 (At5g54270)
- j LHCII-1 - ambiguous hit for LHCII-1.1 (At1g29910), LHCII-1.2 (At1g29920), LHCII-1.3 (At1g29930), LHCII-1.4 (At2g34430), LHCII-1.5 (At2g34420)
- k LHCII-2 - ambiguous hit for LHCII-2.1 (At2g05100), LHCII-2.2 (At2g05070), LHCII-2.4 (At3g27690)