

Supplemental Table 2. MS Analysis of Chloroplast Proteins Co-Purifying with FtsH2-HA.

Seq 20187 - #1 - No Identification

Seq 20188 - #2

Serial#	Gi	Protein Name	Comment	Identified peptides	Coverage																																																																																									
1	3894767	VAR2 (VARIEGATED 2); ATP-dependent peptidase/ ATPase/ metallopeptidase/ zinc ion binding [Arabidopsi...		11	18%																																																																																									
<table border="1"> <thead> <tr> <th>> Score</th> <th>> Mass</th> <th>Sequence</th> <th>Charge</th> <th>xCorr</th> </tr> </thead> <tbody> <tr><td>1</td><td>95</td><td>1396.791</td><td>ADILDSALLRPGR</td><td>3</td><td>1.8472</td></tr> <tr><td>2</td><td>75</td><td>962.4426</td><td>EIDDSIDR</td><td>2</td><td>1.7605</td></tr> <tr><td>3</td><td>76</td><td>1546.811</td><td>LSDSAYEIALSHIK</td><td></td><td></td></tr> <tr><td>4</td><td>88</td><td>1032.471</td><td>GTGIGGGNDER</td><td>2</td><td>2.6868</td></tr> <tr><td>5</td><td>90</td><td>1060.552</td><td>LAEDIDSAVK</td><td>2</td><td>2.5473</td></tr> <tr><td>6</td><td>87</td><td>1188.647</td><td>LAEDIDSAVKK</td><td>2</td><td>2.8219</td></tr> <tr><td>7</td><td>82</td><td>1198.61</td><td>FLEYLDKDR</td><td>2</td><td>1.8303</td></tr> <tr><td>8</td><td>88</td><td>1408.681</td><td>IVAGMEGTVMTDGG</td><td>2</td><td>3.6813</td></tr> <tr><td>9</td><td>94</td><td>1424.676</td><td>IVAGM(+15.995)EGTVMTDGG</td><td>2</td><td>3.6813</td></tr> <tr><td>10</td><td>91</td><td>1424.676</td><td>IVAGMEGTVM(+15.995)TDGK</td><td>2</td><td>3.6813</td></tr> <tr><td>11</td><td>82</td><td>1440.671</td><td>IVAGM(+15.995)EGTVM(+15.995)TDGK</td><td>2</td><td>3.6813</td></tr> <tr><td>12</td><td>90</td><td>1452.842</td><td>VQLPGLSQELLEK</td><td>2</td><td>3.0845</td></tr> <tr><td>13</td><td>83</td><td>1516.829</td><td>EAMDKLVEVLLEK</td><td>2</td><td>2.5205</td></tr> <tr><td>14</td><td>82</td><td>1902.876</td><td>SGGGM(+15.995)GGPGGPNLQFGQSK</td><td>2</td><td></td></tr> </tbody> </table>						> Score	> Mass	Sequence	Charge	xCorr	1	95	1396.791	ADILDSALLRPGR	3	1.8472	2	75	962.4426	EIDDSIDR	2	1.7605	3	76	1546.811	LSDSAYEIALSHIK			4	88	1032.471	GTGIGGGNDER	2	2.6868	5	90	1060.552	LAEDIDSAVK	2	2.5473	6	87	1188.647	LAEDIDSAVKK	2	2.8219	7	82	1198.61	FLEYLDKDR	2	1.8303	8	88	1408.681	IVAGMEGTVMTDGG	2	3.6813	9	94	1424.676	IVAGM(+15.995)EGTVMTDGG	2	3.6813	10	91	1424.676	IVAGMEGTVM(+15.995)TDGK	2	3.6813	11	82	1440.671	IVAGM(+15.995)EGTVM(+15.995)TDGK	2	3.6813	12	90	1452.842	VQLPGLSQELLEK	2	3.0845	13	83	1516.829	EAMDKLVEVLLEK	2	2.5205	14	82	1902.876	SGGGM(+15.995)GGPGGPNLQFGQSK	2	
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2	18422193	VAR1 (VARIEGATED 1); ATP-dependent peptidase/ ATPase/ metallopeptidase [Arabidopsis thaliana]		5	7%																																																																																									
	18402995	FTSH1 (FtsH protease 1); ATP-dependent peptidase/ ATPase/ metallopeptidase [Arabidopsis thaliana]			7%																																																																																									
	1483215	chloroplast FtsH protease [Arabidopsis thaliana]			7%																																																																																									
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3	7526018	ATP synthase CF1 alpha subunit [Arabidopsis thaliana]		4	9%																																																																																									
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4	7526040	ATP synthase CF1 beta subunit [Arabidopsis thaliana]		3	8%																																																																																									
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5	7529033	photosystem I P700 chlorophyll a apoprotein A1 [Arabidopsis thaliana]		2	2%																																																																																									
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6	18397286	LHCB2.4 (Photosystem II light harvesting complex gene 2.3); chlorophyll binding [Arabidopsis thaliana]		2	7%																																																																																									
	18397286	CAB3 (CHLOROPHYLL A/B BINDING PROTEIN 3); chlorophyll binding [Arabidopsis thaliana]			7%																																																																																									
	16374	chlorophyll a/b binding protein (LHCP AB 180) [Arabidopsis thaliana]			8%																																																																																									
	15220615	CAB1 (CHLOROPHYLL A/B BINDING PROTEIN 1); chlorophyll binding [Arabidopsis thaliana]			7%																																																																																									
	18403546	LHB1B2 (Photosystem II light harvesting complex gene 1.5); chlorophyll binding [Arabidopsis thaliana]			7%																																																																																									
	18403549	LHB1B1 (Photosystem II light harvesting complex gene 1.4); chlorophyll binding [Arabidopsis thaliana]			7%																																																																																									
	15224465	LHCB2.2 (Photosystem II light harvesting complex gene 2.2); chlorophyll binding [Arabidopsis thaliana]			7%																																																																																									
	15224471	LHCB2.1 (Photosystem II light harvesting complex gene 2.1); chlorophyll binding [Arabidopsis thaliana]			7%																																																																																									
	4741944	Lhcb2 protein [Arabidopsis thaliana]			7%																																																																																									
	12324161	chlorophyll A-B-binding protein 2 precursor, 5_Quote_ partial; 1-750 [Arabidopsis thaliana]			7%																																																																																									
	4741948	Lhcb2 protein [Arabidopsis thaliana]			7%																																																																																									
	17473828	chlorophyll a/b-binding protein [Arabidopsis thaliana]			7%																																																																																									
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7	7529041	ribulose-1,5-bisphosphate carboxylase/oxygenase large subunit [Arabidopsis thaliana]		2	4%																																																																																									
	1944432	ribulosebisphosphate carboxylase [Arabidopsis thaliana]			5%																																																																																									
	27752799	ribulose 1,5-bisphosphate carboxylase/oxygenase large chain [Arabidopsis thaliana]			5%																																																																																									

Serial#	Gi	Protein Name	Comment	Identified peptides	Coverage
	27752813	ribulose 1,5-bisphosphate carboxylase/oxygenase large chain [Arabidopsis lyrata subsp. lyrata]			
				> Score > Mass Sequence	Charge xCorr
				1 83 1021.531 DTDILAAFR	2 2.7963
				2 93 1228.653 DLAVEGNEIIR	2 3.0323
8	7523929	photosystem II 44 kDa protein [Arabidopsis thaliana]		1	3%
	27435858	photosystem II CP43 protein [Arabidopsis thaliana]			4%
	172045852	RecName: Full=Photosystem II 44 kDa reaction center protein; AltName: Full=P6 protein; AltName: Full ...			3%
				> Score > Mass Sequence	Charge xCorr
				1 94 1426.765 LGANVGSAQGPTGLGK	2 3.3656
Seq 20189 - #3					
1	7523018	ATP synthase CF1 alpha subunit [Arabidopsis thaliana]		5	11%
				> Score > Mass Sequence	Charge xCorr
				1 82 876.5191 FLLQEKV	2 1.6795
				2 80 1604.865 TNKPQFQEIISTK	3 3.1529
				3 90 1252.701 VINALANPIDGR	2 3.5935
				4 85 1252.726 LIESPAPGIISR	2 2.849
				5 89 1416.785 IAQIPVSEAYLGR	2 2.6379
2	7523033	photosystem I P700 chlorophyll a apoprotein A1 [Arabidopsis thaliana]		2	2%
				> Score > Mass Sequence	Charge xCorr
				1 76 76 880.3796 DYDPTNR	2 1.1627
				2 81 1062.526 YSEFLTR	2 2.1231
3	15222449	LHCB2.4 (Photosystem II light harvesting complex gene 2.3); chlorophyll binding [Arabidopsis thaliana]		2	7%
	18397286	CAB3 (CHLOROPHYLL A/B BINDING PROTEIN 3); chlorophyll binding [Arabidopsis thaliana]			7%
	16374	chlorophyll a/b binding protein (LHCP AB 180) [Arabidopsis thaliana]			8%
	15220615	CAB1 (CHLOROPHYLL A/B BINDING PROTEIN 1); chlorophyll binding [Arabidopsis thaliana]			7%
	18403546	LHB1B2 (Photosystem II light harvesting complex gene 1.5); chlorophyll binding [Arabidopsis thaliana]			7%
	18403549	LHB1B1 (Photosystem II light harvesting complex gene 1.4); chlorophyll binding [Arabidopsis thaliana]			7%
	15224465	LHCB2.2 (Photosystem II light harvesting complex gene 2.2); chlorophyll binding [Arabidopsis thaliana]			7%
	15224471	LHCB2.1 (Photosystem II light harvesting complex gene 2.1); chlorophyll binding [Arabidopsis thaliana]			7%
	4741944	Lhcb2 protein [Arabidopsis thaliana]			7%
	12324161	chlorophyll A-B-binding protein 2 precursor, 5_'quote_' partial; 1-750 [Arabidopsis thaliana]			7%
	4741948	Lhcb2 protein [Arabidopsis thaliana]			7%
	17473828	chlorophyll a/b-binding protein [Arabidopsis thaliana]			7%
				> Score > Mass Sequence	Charge xCorr
				1 89 1252.676 NRELEVIHSR	3 3.7774
				2 76 983.4987 FGEAVWFK	2 2.9319
4	7523041	ribulose-1,5-bisphosphate carboxylase/oxygenase large subunit [Arabidopsis thaliana]		1	2%
	1944432	ribulosebisphosphate carboxylase [Arabidopsis thaliana]			2%
	27752799	ribulose 1,5-bisphosphate carboxylase/oxygenase large chain [Arabidopsis thaliana]			2%
	27752813	ribulose 1,5-bisphosphate carboxylase/oxygenase large chain [Arabidopsis lyrata subsp. lyrata]			2%
				> Score > Mass Sequence	Charge xCorr
				1 83 1021.531 DTDILAAFR	2 2.7963

Seq 20190 - #4 - No Identification

Seq 20191 - #5 - No Identification