

## Appendix 2

Shotgun proteomics results from 3-week old larval zebrafish lenses. Rank lists the order of abundance. Spectral count indicates the number of times a peptide from the parent protein was detected in the sample and was used to generate the rank order.

Rank	Spec count	IPI	Protein
1	381	IPI00861740.1	$\beta$ B1 crystallin
2	216	IPI00607401.3	LOC553473 (" $\beta$ B1b crystallin")
3	195	IPI00495773.1	$\gamma$ N2 crystallin
4	171	IPI00859087.1	zgc:171773 (" $\beta$ B1c crystallin")
5	165	IPI00864931.1	$\gamma$ MX crystallin
6	151	IPI00504818.3	$\beta$ A1 crystallin, like (" $\beta$ A1d")
7	106	IPI00607474.1	zgc:110021 (" $\gamma$ MXc crystallin")
8	105	IPI00490966.2	$\beta$ A4 crystallin
9	94	IPI00513173.2	$\beta$ A2-2 crystallin
10	93	IPI00503999.3	$\beta$ A1b crystallin
11	85	IPI00833949.1	zgc:171791 (" $\gamma$ M2d12 crystallin")
12	82	IPI00502160.1	zgc:92692 (" $\gamma$ M2d13 crystallin")
13	73	IPI00489320.1	Calpain 3
14	72	IPI00495820.1	$\beta$ A2-1 crystallin
15	65	IPI00613116.2	LOC569604 (" $\gamma$ M2e crystallin")
16	59	IPI00487422.2	$\gamma$ M2d8 crystallin
17	53	IPI00504980.1	$\gamma$ M2b crystallin
18	48	IPI00512240.1	Elongation factor 1-alpha
19	45	IPI00607295.1	$\gamma$ M2a crystallin
20	43	IPI00607433.4	zgc:153846 (" $\gamma$ M1b crystallin")
21	32	IPI00505178.4	$\gamma$ M2d2 crystallin
22	29	IPI00486495.1	Histone H2A-like
23	28	IPI00482295.2	$\beta$ Actin 1
24	23	IPI00501506.3	$\beta$ B2 crystallin
25	23	IPI00774533.1	zgc:92724 (" $\gamma$ 2d15 crystallin")
26	23	IPI00489442.3	zgc:172241 (" $\gamma$ M2f crystallin")
27	22	IPI00499329.1	$\gamma$ N1 crystallin
28	22	IPI00509939.2	$\alpha$ A crystallin
29	21	IPI00859358.1	zgc:171758 (" $\gamma$ 2d10 crystallin")
30	18	IPI00511483.1	Eukaryotic translation elongation factor 2-like
31	16	IPI00487455.2	Glyceraldehyde 3-phosphate dehydrogenase, spermatogenic
32	15	IPI00495938.1	$\gamma$ M1 crystallin
33	12	IPI00505091.2	Valosin-containing protein
34	12	IPI00506063.2	Griffin
35	11	IPI00498510.1	Transketolase
36	10	IPI00503128.2	$\beta$ A1c crystallin, predicted (" $\beta$ A1c")
37	10	IPI00638856.2	$\gamma$ M2d6 crystallin
38	9	IPI00485316.1	$\gamma$ M4 crystallin
39	9	IPI00491519.4	Ribosomal protein L22-like
40	9	IPI00866205.1	zgc:171793 (" $\gamma$ 2d11 crystallin")
41	8	IPI00493174.1	Nucleoside diphosphate kinase
42	8	IPI00513472.1	40S ribosomal protein S7
43	7	IPI00484294.4	Keratin 5, type II
44	7	IPI00507097.1	Guanine nucleotide-binding protein subunit $\beta$ -2-like
45	7	IPI00508932.3	Fatty acid binding protein 11
46	7	IPI00511925.3	Ribosomal protein L3
47	7	IPI00607319.3	Major intrinsic protein of lens fiber 2
48	7	IPI00507986.1	Ribosomal protein S3
49	7	IPI00494173.1	Eukaryotic translation elongation factor 1 $\gamma$
50	7	IPI00502862.1	Ribosomal protein L21

51	7	IPI00511901.1	Ribosomal protein, large, P1
52	6	IPI00481307.1	Ribosomal protein L7a
53	6	IPI00510559.2	Ribosomal protein L10
54	6	IPI00510181.2	Ribosomal protein S27a
55	6	IPI00481801.2	Similar to histone cluster 2
56	6	IPI00488901.1	Tubulin $\alpha$ 2
57	5	IPI00486208.6	Lengsin
58	5	IPI00511724.1	Thimet oligopeptidase 1
59	5	IPI00491568.2	Ribosomal protein L23a
60	5	IPI00481422.1	Cellular nucleic acid-binding protein
61	5	IPI00488175.1	OBG-like ATPase 1
62	5	IPI00489853.1	Ribosomal protein S10
63	4	IPI00485872.1	Major intrinsic protein of lens fiber 1
64	4	IPI00493144.3	40S ribosomal protein S4x
65	4	IPI00493658.2	Ribosomal protein S2
66	4	IPI00509732.5	Ribosomal protein L12
67	4	IPI00510929.2	zgc:63663 (similar to hsp70)
68	4	IPI00509894.2	$\gamma$ M7 crystallin
69	4	IPI00494039.2	Tubulin $\beta$ 2B
70	4	IPI00489287.1	Ribosomal protein S19
71	3	IPI00501378.1	60S ribosomal protein L19
72	3	IPI00505170.3	60S ribosomal protein L8
73	3	IPI00612196.2	Ubiquitin-activating enzyme E1
74	3	IPI00866651.1	zgc:173495 (" $\gamma$ 2d16 crystallin")
75	3	IPI00502356.1	zgc:65996 (part of ribosome)
76	3	IPI00492852.1	Ribosomal protein L30
77	3	IPI00503909.2	Ribosomal protein L14
78	3	IPI00614919.1	Hypothetical LOC570536 (cystatin-like domain)
79	2	IPI00512700.3	CP49
80	2	IPI00497691.1	Ribosomal protein L27a-like
81	2	IPI00496337.3	Novel protein similar to type I cytokeratin, enveloping layer
82	2	IPI00500253.1	60s ribosomal protein L10a
83	2	IPI00497774.1	Peptidyl-prolyl cis-trans isomerase
84	1	IPI00607324.4	$\gamma$ M3 crystallin
85	1	IPI00505526.1	Ribosomal protein L4
86	1	IPI00772565.3	Scinla
87	1	IPI00502344.1	Eukaryotic translation initiation factor 4A
88	1	IPI00503899.2	zgc:110028 (" $\gamma$ MXb crystallin")
89	1	IPI00505672.3	40S ribosomal protein S8
90	1	IPI00773429.1	Ribosomal protein, large, p21
91	1	IPI00487430.1	Ribosomal protein S9
92	1	IPI00495274.2	SERPINE1 mRNA binding protein 1
93	1	IPI00492905.1	Ribosomal protein L11
94	1	IPI00505092.1	GTP-binding nuclear protein Ran
95	1	IPI00632292.1	Ribosomal protein L13a
96	1	IPI00858471.1	$\alpha$ 2 spectrin
97	1	IPI00835643.1	Similar to collagen, $\alpha$ 4 type V
98	1	IPI00615483.4	Titin A
99	0	IPI00486384.5	$\gamma$ M2d7 crystallin
100	0	IPI00863981.1	zgc:173493
101	0	IPI00508331.2	Ribosomal protein S15a
102	0	IPI00496539.3	Apolipoprotien B
103	0	IPI00507423.3	$\gamma$ M6 crystallin
104	0	IPI00809984.2	HAUS augmin-like complex, subunit 6
105	0	IPI00481066.4	Nebulin
106	0	IPI00482809.3	Histone H4

107	0	IPI00505165.3	Similar to Probable ATP-dependent RNA helicase DDX6
108	0	IPI00619395.2	PHD finger protein 2
109	0	IPI00837022.2	zgc:136817 (rho signaling)
110	0	IPI00508331.2	Ribosomal protein S15a
111	0	IPI00500049.3	SLIT and NTRK-like protein 4
112	0	IPI00804981.3	Similar to TBC1 domain family member 1