

1 Supplementary Table S1. The common down-regulated proteins shared in three batches (DW, TR, and AO) versus FS identified by label-free  
2 analysis.

Accession	Protein name	Organism	Coverage	Peptides	PSMs	Unique Peptides	AAs	MW [kDa]	calc. pI	emPAI	Score	Sequest HT
F8TCS5	40S ribosomal protein S3a	<i>Fenneropenaeus merguensis</i>	35.34	9	21	9	266	30	9.83	1.276	52.26	
A0A0P4WS N1	60S ribosomal protein L18a	<i>Scylla olivacea</i>	11.24	2	5	2	178	20.9	10.54	0.292	10.06	
A0A2S0UV U2	60S ribosomal protein L7A	<i>Litopenaeus vannamei</i>	4.71	1	4	1	276	31.3	10.86	0.086	7.99	
A1KZ91	Actin 1	<i>Fenneropenaeus chinensis</i>	70.74	22	2975	4	376	41.8	5.48	757.578	3894.39	
O96658	Actin 2	<i>Penaeus monodon</i>	72.15	24	4967	1	377	41.8	5.24	1444.44	7004.08	
H6CSY4	Actin 6 (Fragment)	<i>Pandalus platyceros</i>	50.44	10	1379	3	228	25.2	5.21	12.594	1103.45	
A0A0A0PA H2	Activated C kinase 1 receptor	<i>Marsupenaeus japonicus</i>	70.75	16	35	16	318	35.6	7.93	6.305	69.39	
E2S085	Alpha-1,4 glucan phosphorylase	<i>Marsupenaeus japonicus</i>	55.52	40	583	14	852	98	7.25	8.698	1437.44	
A0A2P1JJ5 8	Alpha-actinin, sarcomeric-like isoform X1 (Fragment)	<i>Procambarus clarkii</i>	60.34	53	774	12	890	102.7	5.35	27.23	1694.14	
D0UN61	Alpha-spectrin (Fragment)	<i>Libinia emarginata</i>	33.68	2	5	1	95	11.2	4.77	0.668	9.71	
B1PVZ9	Arginine kinase (Fragment)	<i>Metapenaeus ensis</i>	70.03	38	2331	1	357	40.2	6.62	253.83	3572.64	
G3C6M0	Arginine kinase (Fragment)	<i>Paralomis dofleini</i>	29.05	7	359	1	210	23.7	8.34	5.449	346.55	
P51545	Arginine kinase	<i>Marsupenaeus japonicus</i>	47.89	27	1842	1	355	40	6.8	46.579	2876.83	

A0A0P4WB44	ATP-dependent (S)-NAD(P)H-hydrate dehydratase	<i>Scylla olivacea</i>	6.45	2	9	2	310	32.8	7.42	0.438	15.2
A0A193CGZ5	ATP-dependent phosphofructokinase	<i>6-Macrobrachium nipponense</i>	8.52	9	36	3	974	108.1	6.15	0.46	101.74
C7F442	Beta-actin (Fragment)	<i>Penaeus monodon</i>	67.53	12	2271	1	194	21.5	6.02	183.785	2964.52
A0A0C5DJX2	Calcium-transporting ATPase	<i>Cherax destructor</i>	22.85	21	351	2	1002	109.9	5.17	3.068	769.68
U5HSJ7	Calcium-transporting ATPase	<i>Litopenaeus vannamei</i>	50.70	46	740	24	1002	109.7	5.27	13.513	1383.72
K9S0T9	Calmodulin	<i>Portunus trituberculatus</i>	46.98	6	23	6	149	16.8	4.22	4.623	52.25
A0A0A7HPN7	DJ-1 protein	<i>Litopenaeus vannamei</i>	60.43	8	23	8	187	19.1	5.68	2.415	50.22
G3GDU6	Enolase (Fragment)	<i>Solenocera crassicornis</i>	55.56	6	80	2	117	12.9	4.82	9	152.43
U5YDS9	Eukaryotic initiation factor 4A	<i>Litopenaeus vannamei</i>	32.48	11	24	11	428	48.4	5.25	1.297	54.28
A0A2H4V3E1	Fast-type skeletal muscle actin 15	<i>Litopenaeus vannamei</i>	72.41	25	4326	4	377	41.8	5.24	574.44	4693.97
A0A2H4V3U1	Fast-type skeletal muscle actin 18	<i>Litopenaeus vannamei</i>	72.41	25	5032	1	377	41.8	5.24	1736.80 1	7256.07
A0A2H4V3E4	Fast-type skeletal muscle actin 8	<i>Litopenaeus vannamei</i>	72.15	23	3572	6	377	41.9	5.31	690.831	4636.78
A0A2H4V3E2	Fast-type skeletal muscle actin 9	<i>Litopenaeus vannamei</i>	44.56	18	2790	1	377	41.9	5.24	157.489	3420.42
E2IH93	Fatty-acid binding protein	<i>Litopenaeus vannamei</i>	16.18	2	7	2	136	15.5	5.74	0.334	9.95
A0A068FCL9	Fructose-bisphosphate aldolase	<i>Fenneropenaeus chinensis</i>	64.93	23	609	18	365	39.8	7.06	45.416	1039.47

I7L125	Gelsolin	<i>Homarus americanus</i>	8.36	5	13	5	754	83.6	4.91	0.372	17.84
P00357	Glyceraldehyde-3-phosphate dehydrogenase	<i>Homarus americanus</i>	43.84	14	487	1	333	35.7	7.01	5.629	874.66
A0A2S1P7 N3	Glyceraldehyde-3-phosphate dehydrogenase	<i>Litopenaeus vannamei</i>	73.49	23	788	9	332	35.4	6.65	42.94	1650.06
C7G307	GTP binding protein alpha subunit Go	<i>Marsupenaeus japonicus</i>	10.45	3	4	3	354	40.3	5.44	0.269	6.96
A0A1B1FH 76	Heat shock protein 70 kDa (Fragment)	<i>Carcinus maenas</i>	26.01	5	30	1	223	23.9	5.03	1.955	80
A0A1B1FH 65	Heat shock protein 70 kDa (Fragment)	<i>Cardisoma armatum</i>	24.03	10	59	2	516	57	5.4	1.195	165.77
A0A1B1FG Y0	Heat shock protein 70 kDa	<i>Chaceon affinis</i>	18.20	9	54	1	654	71.4	5.53	0.931	148.02
C3VC58	Heat shock protein 90	<i>Penaeus monodon</i>	18.75	12	32	2	720	83.5	4.96	0.829	62.81
Q26180	Hemocyanin	<i>Litopenaeus vannamei</i>	52.11	33	330	24	662	74.9	5.52	21.675	696.02
G1AP69	Hemocyanin	<i>Penaeus monodon</i>	33.67	20	191	2	683	77.9	5.57	7.072	319.82
A0A059TE W9	Hemocyanin subunit L1 (Fragment)	<i>Litopenaeus vannamei</i>	53.03	34	347	5	677	77.2	5.77	33.268	793.65
A0A059TG C6	Hemocyanin subunit L1 (Fragment)	<i>Litopenaeus vannamei</i>	46.38	31	330	2	677	77.2	5.92	18.169	748.49
A0A0G2YA K1	Hemocyanin V4	= <i>Litopenaeus vannamei</i>	48.82	26	201	7	678	77.6	5.94	9.513	378.97
A0A0D6DQ G1	Histone H2A	<i>Macrobrachium rosenbergii</i>	28.47	3	35	3	137	14.7	10.49	1.512	63.77
A0A0N7G7	Histone H2B (Fragment)	<i>Eriocheir sinensis</i>	26.83	3	32	3	123	13.6	10.39	2.728	49.84

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A0A0P4W MJ1	Histone H3	<i>Scylla olivacea</i>	11.76	2	8	2	136	15.3	11.27	0.425	9.39
A0A0P4VP L0	Histone H4	<i>Scylla olivacea</i>	41.75	5	30	5	103	11.4	11.36	4.012	62.75
A0A2P1JJ6 4	Isocitrate dehydrogenase (Fragment)	<i>Procambarus clarkii</i>	17.26	7	21	7	446	50.1	8.1	0.658	41.18
I1VSB4	L-lactate dehydrogenase	<i>Litopenaeus vannamei</i>	61.45	17	261	17	332	36	7.31	30.623	671.84
A0A0P4WL G3	Malate dehydrogenase	<i>Scylla olivacea</i>	18.98	6	25	6	332	35.8	6.05	0.905	47.83
F8QXK4	Myosin (Fragment)	<i>Scylla paramamosain</i>	31.52	6	328	4	184	20.5	9.06	10.45	483.76
Q8T6G0	Myosin heavy chain (Fragment)	<i>Homarus gammarus</i>	51.22	1	4	1	41	4.6	5.11	3.642	3.61
A0A288ZB A6	Myosin heavy chain	<i>Palaemon carinicauda</i>	17.93	37	2209	3	1913	217.7	6.05	1.888	3458.76
K4Q111	Myosin heavy chain type 1	<i>Litopenaeus vannamei</i>	70.47	191	9279	53	1913	219.6	6.02	265.708	17224.86
K4Q4N8	Myosin heavy chain type 1	<i>Penaeus monodon</i>	51.93	134	6436	6	1914	219.5	6.05	41.907	10793.78
N0DV32	Myosin heavy chain type 3 (Fragment)	<i>Penaeus monodon</i>	52.86	24	1047	3	297	34.5	5.59	33.333	1025.32
F8WR03	Myosin heavy chain type a	<i>Marsupenaeus japonicus</i>	48.95	124	6451	3	1912	219.4	6.07	40.158	10905.55
F8WR04	Myosin heavy chain type b	<i>Marsupenaeus japonicus</i>	47.59	114	4907	6	1910	218.9	6.37	29.576	7884.7
D4P8F7	Myosin light chain	<i>Marsupenaeus japonicus</i>	79.08	11	1007	6	153	17.5	4.74	1210.528	1387.32
A5J299	Nucleoside diphosphate kinase	<i>Litopenaeus vannamei</i>	58.28	8	38	8	151	17	7.24	14.199	37.44
D7F2L7	Paramyosin (Fragment)	<i>Palaemon varians</i>	33.82	2	26	2	68	8	8.15	4.179	55.51

G5D053	Peptidyl-prolyl cis-trans isomerase	<i>Litopenaeus vannamei</i>	70.12	9	44	9	164	17.6	8.25	5.494	117.13
A0A2P1JJ63	Phosphoglucomutase-1-like (Fragment)	<i>Procambarus clarkii</i>	11.41	5	22	5	561	60.9	5.78	0.468	48.67
A0A0P4WYI4	Phosphoglycerate mutase	<i>Scylla olivacea</i>	23.25	8	93	4	314	35.1	8.79	1.683	118.47
A0A0S1LK K8	Phosphopyruvate hydratase	<i>Marsupenaeus japonicus</i>	58.53	22	726	1	434	47.3	6.4	10.994	1769.5
O96656	Phosphopyruvate hydratase	<i>Penaeus monodon</i>	68.89	25	786	2	434	47.2	6.62	16.013	2017.24
A0A0P4VUA5	Phosphorylase b kinase regulatory subunit	<i>Scylla olivacea</i>	5.28	7	12	7	1212	136.1	6.65	0.216	28.42
A5J297	Profilin	<i>Litopenaeus vannamei</i>	27.78	3	17	3	126	13.9	6.77	2.594	11.54
Q86GD6	Projectin	<i>Procambarus clarkii</i>	10.55	80	389	77	8625	962	6.43	0.406	766.82
L0CM38	QM protein	<i>Litopenaeus vannamei</i>	15.45	4	11	4	220	25.5	10.05	0.65	25.36
A0A2D3E2V2	Rab GDP dissociation inhibitor (Fragment)	<i>Procambarus clarkii</i>	24.72	8	35	1	445	50.1	5.68	1.154	83.45
M4M7B8	Ribosomal protein L18	<i>Litopenaeus vannamei</i>	26.60	4	13	4	188	21.6	11.66	0.995	22.35
C4PL18	Ribosomal protein L3	<i>Penaeus monodon</i>	20.94	8	14	6	406	46.4	10.3	1.021	31.35
Q2I3E8	Ribosomal protein L8	<i>Litopenaeus vannamei</i>	24.90	5	18	5	257	28.2	11.05	0.957	30.16
D9J2T3	Ryanodine receptor (Fragment)	<i>Litopenaeus vannamei</i>	33.68	28	109	15	1238	139.6	4.68	2.162	247.09
A0A0G2QMX0	Ryanodine receptor (Fragment)	<i>Procambarus clarkii</i>	14.23	2	9	1	267	30.5	4.98	0.438	16.6
P86909	Sarcoplasmic calcium-binding protein (Fragment)	<i>Chionoecetes opilio</i>	100.00	1	46	1	8	0.8	9.99	9	64.38
D7F2L3	Sarcoplasmic calcium-binding protein 1 (Fragment)	<i>Palaemon varians</i>	32.35	3	379	1	68	7.7	4.84	2.162	129.08

C7A639	Sarcoplasmic calcium-binding protein	<i>Litopenaeus vannamei</i>	87.05	25	2938	5	193	22.1	4.89	706.946	3631.2
P02636	Sarcoplasmic calcium-binding protein, alpha-B and -A chains	<i>Penaeus sp.</i>	69.79	20	2169	4	192	22	4.81	49.119	2120.46
P02635	Sarcoplasmic calcium-binding protein, beta chain	<i>Penaeus sp.</i>	46.88	11	884	6	192	22	4.67	22.357	1021.14
K4EG00	Skeletal muscle alpha actin (Fragment)	<i>Pandalus platyceros</i>	33.94	7	1508	1	218	24.2	5.29	7.483	1587.83
Q6XGZ8	Slow muscle myosin S1 heavy chain (Fragment)	<i>Homarus americanus</i>	36.88	23	906	3	507	58.5	5.27	5.19	846.45
G9D972	Small heat shock protein	<i>Fenneropenaeus chinensis</i>	30.43	4	22	4	184	21	5.49	1.239	60.65
F4YYJ0	Sodium potassium-transporting ATPase subunit beta	<i>Litopenaeus vannamei</i>	21.09	5	10	5	313	35.9	5.55	0.616	22.72
A0A139Z42 4	Sodium/potassium-transporting ATPase subunit alpha	<i>Litopenaeus vannamei</i>	31.98	26	51	17	1038	115.3	5.48	1.31	130.01
A0A2H4V3 F4	Specific actin 1	<i>Litopenaeus vannamei</i>	61.44	20	2323	8	376	41.7	5.39	82.176	2339.71
A0A0N7ZD R2	T-complex protein 1 subunit delta	<i>Scylla olivacea</i>	17.98	8	16	8	534	57.6	7.91	0.632	38.68
A0A0P0C4 Q7	Tetraspanin	<i>Litopenaeus vannamei</i>	29.29	3	14	3	239	25.7	4.65	2.162	43.35
B0FC92	Translationally controlled tumor protein	<i>Litopenaeus vannamei</i>	29.17	4	13	4	168	19.2	4.53	2.511	23.26
A1KYZ2	Tropomyosin	<i>Penaeus monodon</i>	77.46	37	1486	9	284	32.8	4.75	130.113	2038.73
A0A2P0ND	Troponin C	<i>Palaemon carinicauda</i>	16.67	4	79	2	150	16.9	4.03	1.894	185.99

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U8												
G8H4B7	Troponin C1		<i>Litopenaeus vannamei</i>	51.33	8	100	4	150	16.8	4.02	9	289.92
K7WFT8	Troponin I		<i>Litopenaeus vannamei</i>	48.61	15	294	3	216	24.8	9.51	19.153	601.98
A0A2P0ND U9	Troponin T		<i>Palaemon carinicauda</i>	17.92	11	245	11	385	45.7	5.06	3.541	325.73
I6LKV7	Ubiquitin/ribosomal protein 2	S27	fusion <i>Eriocheir sinensis</i>	33.76	5	43	5	157	17.9	9.74	2.162	55.85
U5TQQ5	Valosin-containing protein		<i>Penaeus monodon</i>	28.33	16	53	6	826	91.6	5.67	1.154	101.77

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