

# Proteomic investigation in plasma from women with fibromyalgia in response to a 15-week resistance exercise intervention

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## Supplementary Digital Content (SDC)

### Clinical and exercise-related data

#### Post exercise FM vs. CON

Post exercise compared to CON, FM had significant higher pain intensity (VAS), fatigue (MFI all subscales), FIQ total score, pain catastrophizing thoughts (PCS), and psychological distress (HADS total). Further, significant reduced PPT was found in FM compared to CON. No significance difference in pain acceptance (CPAQ) was seen between the two groups (SDC Table 1).

Post exercise, FM had significant reduced physical capacity compared to CON as described by the variables SixMWT and handgrip force (both sides). No significant differences were found between the two groups in the variables knee extension force and elbow strength (both sides) (SDC Table 1).

#### Baseline vs. post exercise in CON

The CON group significantly improved their physical fatigue, walking distance, knee extension force, and handgrip force on the left side after 15 weeks of resistance exercise (SDC Table 1).

**SDC Table 1.** Presented data includes participants who performed 15-week resistance exercise, and which plasma samples were analyzed with proteomics at both time points. FM = 21, CON= 24. These data have been published elsewhere although not the same number of participants [11, 20].

Variables	Baseline/post exercise	FM/CON (n included in test)	FM Median (IQR)	CON Median (IQR)	P-value between groups
<b>Background data</b>					
Age (years)	Baseline	21/24	50.0 (16.5)	53.0 (18.8)	0.927 <sup>a</sup>
BMI (kg/m <sup>2</sup> )	Baseline	21/24	25.3 (5.5)	24.3 (5.6)	0.172 <sup>a</sup>
FM duration (years)	Baseline	21	10.0 (11.0)	-	-
Tender points (n)	Baseline	21	16.0 (2.0)	-	-
Systolic blood pressure (mmHg)	Baseline	20/24	122.5 (35.0)	125.5 (20.8)	0.895 <sup>b</sup>
Diastolic blood pressure (mmHg)	Baseline	20/24	85.0 (15.0)	85.0 (11.5)	0.935 <sup>b</sup>
<b>Pain characteristics variables</b>					
VAS global pain (0-100)	Baseline	21/24	54.0 (36.0)	0.0 (0.0)	< 0.001 <sup>a</sup>
	Post	21/24	35.0 (36.5)	0.0 (0.0)	< 0.001 <sup>a</sup>
	<i>P</i> -value with-in groups		<b>0.031<sup>c</sup></b>	0.465 <sup>c</sup>	
CPAQ total (0-120)	Baseline	21/12	62.0 (25.5)	85.5 (42.5)	< 0.01 <sup>b</sup>
	Post	21/15	75.0 (25.0)	73.0 (39.0)	0.429 <sup>b</sup>
	<i>P</i> -value with-in groups		<b>0.011<sup>d</sup></b>	0.255 <sup>d</sup>	
<b>MFI (4-20)</b>					
General fatigue	Baseline	21/24	19.0 (3.0)	7.5 (5.0)	< 0.001 <sup>a</sup>
	Post	21/24	18.0 (4.5)	7.0 (7.8)	< 0.001 <sup>a</sup>
	<i>P</i> -value with-in groups		<b>0.046<sup>c</sup></b>	0.309 <sup>c</sup>	
Physical fatigue	Baseline	21/24	16.0 (3.5)	6.5 (4.0)	< 0.001 <sup>a</sup>
	Post	21/24	14.0 (6.0)	5.0 (3.8)	< 0.001 <sup>a</sup>
	<i>P</i> -value with-in groups		0.095 <sup>c</sup>	<b>0.049<sup>c</sup></b>	
Mental fatigue	Baseline	21/24	17.0 (3.5)	6.0 (5.5)	< 0.001 <sup>a</sup>
	Post	21/24	15.0 (7.0)	7.0 (3.0)	< 0.001 <sup>a</sup>
	<i>P</i> -value with-in groups		<b>0.024<sup>c</sup></b>	0.624 <sup>c</sup>	

Reduced activity	Baseline	21/24	16.0 (6.5)	5.0 (3.5)	< <b>0.001</b> <sup>a</sup>
	Post	21/24	15.0 (6.5)	6.5 (3.0)	< <b>0.001</b> <sup>a</sup>
	p-value with-in groups		0.120 <sup>c</sup>	0.390 <sup>c</sup>	
Reduced motivation	Baseline	21/24	12.0 (6.0)	5.0 (2.0)	< <b>0.001</b> <sup>a</sup>
	Post	21/24	10.0 (8.0)	4.0 (2.8)	< <b>0.001</b> <sup>a</sup>
	P-value with-in groups		0.246 <sup>c</sup>	0.524 <sup>c</sup>	
FIQ total (0-100)	Baseline	21/21	64.1 (22.1)	3.5 (8.4)	< <b>0.001</b> <sup>a</sup>
	Post	21/23	60.1 (29.2)	2.9 (14.5)	< <b>0.001</b> <sup>a</sup>
	P-value with-in groups		0.079 <sup>c</sup>	0.184 <sup>c</sup>	
PCS total (0-52)	Baseline	21/16	20.0 (17.5)	2.5 (9.3)	< <b>0.001</b> <sup>a</sup>
	Post	21/20	13.0 (11.5)	1.0 (9.0)	< <b>0.001</b> <sup>a</sup>
	P-value with-in groups		< <b>0.01</b> <sup>c</sup>	0.449 <sup>c</sup>	
HADS total (0-42)	Baseline	21/24	17.0 (14.0)	3.5 (5.0)	< <b>0.001</b> <sup>a</sup>
	Post	21/24	11.0 (17.5)	2.5 (7.0)	< <b>0.001</b> <sup>a</sup>
	P-value with-in groups		<b>0.047</b> <sup>c</sup>	0.569 <sup>c</sup>	
PPT mean all sites (kPa)	Baseline	21/24	146.0 (116.0)	355.0 (168.5)	< <b>0.001</b> <sup>a</sup>
	Post	21/24	159.0 (105.0)	318.5 (152.0)	< <b>0.001</b> <sup>a</sup>
	P-value with-in groups		0.498 <sup>c</sup>	0.361 <sup>c</sup>	
<b>Exercise related variables</b>					
SixMWT (m)	Baseline	21/23	588.0 (127.5)	644.0 (106.0)	<b>0.044</b> <sup>b</sup>
	Post	21/23	594.0 (122.5)	677.0 (67.0)	< <b>0.01</b> <sup>b</sup>
	P-value with-in groups		0.923 <sup>d</sup>	< <b>0.01</b> <sup>d</sup>	
SteveStrong, Knee extension force (N) <sub>right</sub>	Baseline	21/23	330.0 (144.5)	399.0 (94.0)	0.083 <sup>b</sup>
	Post	21/23	410.0 (166.0)	408.0 (102.0)	0.713 <sup>b</sup>
	P-value with-in groups		0.065 <sup>d</sup>	0.857 <sup>d</sup>	
SteveStrong, Knee extension force (N) <sub>left</sub>	Baseline	21/23	312.0 (175.0)	367.0 (135.0)	0.552 <sup>b</sup>
	Post	21/23	357.0 (152.0)	385.0 (102.0)	0.593 <sup>b</sup>

			<i>P</i> -value with-in groups	<b>0.044<sup>d</sup></b>	<b>0.032<sup>d</sup></b>	
Gripit, Handgrip force mean (N) <sub>right</sub>	Baseline	21/23	153.0 (137.5)	235.0 (44.0)	<b>&lt; 0.001<sup>b</sup></b>	
	Post	20/23	198.0 (116.8)	249.0 (50.0)	<b>0.012<sup>b</sup></b>	
	<i>P</i> -value with-in groups		<b>&lt; 0.01<sup>d</sup></b>	0.245 <sup>d</sup>		
Gripit, Handgrip force mean (N) <sub>left</sub>	Baseline	21/23	150.0 (120.0)	209.0 (56.0)	<b>&lt; 0.001<sup>b</sup></b>	
	Post	20/23	169.5 (93.5)	233.0 (71.0)	<b>&lt; 0.01<sup>b</sup></b>	
	<i>P</i> -value with-in groups		<b>0.024<sup>d</sup></b>	<b>&lt; 0.01<sup>d</sup></b>		
Isobex, Elbow strength maximum (kg) <sub>right</sub>	Baseline	21/16	11.9 (7.3)	18.4 (7.8)	<b>&lt; 0.01<sup>b</sup></b>	
	Post	21/16	14.7 (5.4)	16.8 (7.4)	0.103 <sup>b</sup>	
	<i>P</i> -value with-in groups		<b>0.014<sup>d</sup></b>	0.858 <sup>d</sup>		
Isobex, Elbow strength maximum (kg) <sub>left</sub>	Baseline	21/16	11.5 (8.6)	17.3 (6.6)	<b>&lt; 0.01<sup>b</sup></b>	
	Post	21/16	14.5 (5.9)	16.4 (5.6)	0.081 <sup>b</sup>	
	<i>P</i> -value with-in groups		0.113 <sup>d</sup>	0.514 <sup>d</sup>		

a = Mann-Whitney U test, b = Student t-test, c= Wilcoxon signed rank test, d= paired t-test.

FM = Fibromyalgia, CON = controls, BMI = Body mass index, VAS = Visual Analogue Scale, PPT = Pressure pain thresholds, FIQ = Fibromyalgia Impact Questionnaire, CPAQ = Chronic Pain Acceptance Questionnaire, PCS = Pain Catastrophizing Scale, HADS = Hospital Anxiety and Depression Scale, MFI = Multidimensional Fatigue Inventory. SixMWT = Six minute walk test. Bold marking indicates a significant *P*-value.

**SDC Table 2. Identified plasma proteins.**

Full protein name	Accession number	Gene name (used in STRING networks)	Protein name in MVDA models
14-3-3 protein epsilon;Isoform SV of 14-3-3 protein epsilon	P62258;P62258-2	YWHAE	1433E
14-3-3 protein zeta/delta	P63104	YWHAZ	1433Z
40S ribosomal protein S3a	P61247	RPS3A	RS3A
60S ribosomal protein L37a	P61513	RPL37A	RL37A
72 kDa type IV collagenase;Isoform 2 of 72 kDa type IV collagenase;Isoform 3 of 72 kDa type IV collagenase	P08253;P08253-2;P08253-3	MMP2	MMP2
A disintegrin and metalloproteinase with thrombospondin motifs 13	Q76LX8	ADAMTS13	ATS13
Actin, aortic smooth muscle;Actin, gamma-enteric smooth muscle	P62736;P63267	ACTA2;ACTG2	ACTA;ACTH
Actin, cytoplasmic 1;Actin, cytoplasmic 2	P60709;P63261	ACTB;ACTG1	ACTB;ACTG
ADAM DEC1;Isoform 2 of ADAM DEC1	O15204;O15204-2	ADAMDEC1	ADEC1
Adenosine deaminase 2;Isoform 2 of Adenosine deaminase 2	Q9NZK5;Q9NZK5-2	ADA2	ADA2
Adenylyl cyclase-associated protein 1;Isoform 2 of Adenylyl cyclase-associated protein 1	Q01518;Q01518-2	CAP1	CAP1
Adhesion G protein-coupled receptor F5;Isoform 2 of Adhesion G protein-coupled receptor F5	Q8IZF2;Q8IZF2-2	ADGRF5	AGRF5

Adhesion G-protein coupled receptor G6;Isoform 2 of Adhesion G-protein coupled receptor G6;Isoform 3 of Adhesion G-protein coupled receptor G6;Isoform 4 of Adhesion G-protein coupled receptor G6	Q86SQ4;Q86SQ4-2;Q86SQ4-3;Q86SQ4-4	ADGRG6	AGRG6
Adipocyte plasma membrane-associated protein	Q9HDC9	APMAP	APMAP
Adiponectin	Q15848	ADIPOQ	ADIPO
ADP/ATP translocase 1;ADP/ATP translocase 3	P12235;P12236	SLC25A4;SLC25A6	ADT1;ADT3
ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 2;Isoform 2 of ADP-ribosyl cyclase/cyclic ADP-ribose hydrolase 2	Q10588;Q10588-2	BST1	BST1
Afadin- and alpha-actinin-binding protein;Isoform 2 of Afadin- and alpha-actinin-binding protein;Isoform 3 of Afadin- and alpha-actinin-binding protein	Q9Y2D8;Q9Y2D8-2;Q9Y2D8-3	SSX2IP	ADIP
Afamin	P43652	AFM	AFAM
Alpha-1-acid glycoprotein 1	P02763	ORM1	A1AG1
Alpha-1-acid glycoprotein 2	P19652	ORM2	A1AG2
Alpha-1-antichymotrypsin	P01011	SERPINA3	AACT
Alpha-1-antitrypsin	P01009	SERPINA1	A1AT
Alpha-1B-glycoprotein	P04217	A1BG	A1BG
Alpha-2-antiplasmin	P08697	SERPINF2	A2AP
Alpha-2-HS-glycoprotein	P02765	AHSG	FETUA
Alpha-2-macroglobulin	P01023	A2M	A2MG

Alpha-actinin-1;Isoform 2 of Alpha-actinin-1;Isoform 3 of Alpha-actinin-1	P12814;P12814-2;P12814-3	ACTN1	ACTN1
Alpha-amylase 1	P04745	AMY1A	AMY1
Alpha-mannosidase 2	Q16706	MAN2A1	MA2A1
Alpha-N-acetylglucosaminidase	P54802	NAGLU	ANAG
Aminopeptidase N	P15144	ANPEP	AMPN
Angiogenin	P03950	ANG	ANGI
Angiopoietin-related protein 3	Q9Y5C1	ANGPTL3	ANGL3
Angiopoietin-related protein 6	Q8NI99	ANGPTL6	ANGL6
Angiotensinogen	P01019	AGT	ANGT
Annexin A1	P04083	ANXA1	ANXA1
Antileukoproteinase	P03973	SLPI	SLPI
Antithrombin-III	P01008	SERPINC1	ANT3
Apolipoprotein A-I	P02647	APOA1	APOA1
Apolipoprotein A-II	P02652	APOA2	APOA2
Apolipoprotein A-IV	P06727	APOA4	APOA4
Apolipoprotein A-V	Q6Q788	APOA5	APOA5
Apolipoprotein B-100	P04114	APOB	APOB
Apolipoprotein C-I	P02654	APOC1	APOC1
Apolipoprotein C-II	P02655	APOC2	APOC2
Apolipoprotein C-III	P02656	APOC3	APOC3
Apolipoprotein C-IV	P55056	APOC4	APOC4
Apolipoprotein D	P05090	APOD	APOD
Apolipoprotein E	P02649	APOE	APOE
Apolipoprotein F	Q13790	APOF	APOF
Apolipoprotein L1;Isoform 2 of Apolipoprotein L1	O14791;O14791-2	APOL1	APOL1
Apolipoprotein M	O95445	APOM	APOM
Apolipoprotein(a)	P08519	LPA	APOA
Aspartate aminotransferase, cytoplasmic;Isoform 2 of Aspartate aminotransferase, cytoplasmic	P17174;P17174-2	GOT1	AATC
ATP synthase subunit beta, mitochondrial	P06576	ATP5F1B	ATPB
ATP-dependent RNA helicase DDX55	Q8NHQ9	DDX55	DDX55



Band 3 anion transport protein;Isoform 2 of Band 3 anion transport protein	P02730;P02730-2	SLC4A1	B3AT
Basement membrane-specific heparan sulfate proteoglycan core protein	P98160	HSPG2	PGBM
Beta-2-glycoprotein 1	P02749	APOH	APOH
Beta-2-microglobulin	P61769	B2M	B2MG
Beta-Ala-His dipeptidase	Q96KN2	CNDP1	CNDP1
Beta-parvin;Isoform 2 of Beta-parvin;Isoform 3 of Beta-parvin	Q9HBI1;Q9HBI1-2;Q9HBI1-3	PARVB	PARVB
Biotinidase;Isoform 2 of Biotinidase;Isoform 3 of Biotinidase;Isoform 4 of Biotinidase	P43251;P43251-2;P43251-3;P43251-4	BTD	BTD
Bisphosphoglycerate mutase	P07738	BPGM	PMGE
Bone marrow proteoglycan	P13727	PRG2	PRG2
BPI fold-containing family B member 1	Q8TDL5	BPIFB1	BPIB1
Brain acid soluble protein 1	P80723	BASP1	BASP1
C4b-binding protein alpha chain	P04003	C4BPA	C4BPA
C4b-binding protein beta chain;Isoform 2 of C4b-binding protein beta chain	P20851;P20851-2	C4BPB	C4BPB
Cadherin-1	P12830	CDH1	CADH1
Cadherin-13;Isoform 4 of Cadherin-13	P55290;P55290-4	CDH13	CAD13
Cadherin-5	P33151	CDH5	CADH5
Calcium uptake protein 2, mitochondrial	Q8IYU8	MICU2	MICU2
Calmodulin-like protein 5	Q9NZT1	CALML5	CALL5
Calnexin;Isoform 2 of Calnexin;Isoform 3 of Calnexin	P27824;P27824-2;P27824-3	CANX	CALX
Calreticulin	P27797	CALR	CALR
Carbonic anhydrase 1	P00915	CA1	CAH1
Carbonic anhydrase 2	P00918	CA2	CAH2

Carboxypeptidase B2	Q96IY4	CPB2	CBPB2
Carboxypeptidase N catalytic chain	P15169	CPN1	CBPN
Carboxypeptidase N subunit 2	P22792	CPN2	CPN2
Carboxypeptidase Q	Q9Y646	CPQ	CBPQ
Cartilage acidic protein 1;Isoform 2 of Cartilage acidic protein 1;Isoform 3 of Cartilage acidic protein 1	Q9NQ79;Q9NQ79-2;Q9NQ79-3	CRTAC1	CRAC1
Cartilage oligomeric matrix protein	P49747	COMP	COMP
Catalase	P04040	CAT	CATA
Cathelicidin antimicrobial peptide	P49913	CAMP	CAMP
Cathepsin B	P07858	CTSB	CATB
Cathepsin D	P07339	CTSD	CATD
Cathepsin S;Isoform 2 of Cathepsin S	P25774;P25774-2	CTSS	CATS
Caveolae-associated protein 2	O95810	CAVIN2	CAVN2
CD109 antigen;Isoform 2 of CD109 antigen;Isoform 4 of CD109 antigen	Q6YHK3;Q6YHK3-2;Q6YHK3-4	CD109	CD109

CD44 antigen;Isoform 10 of CD44 antigen;Isoform 11 of CD44 antigen;Isoform 12 of CD44 antigen;Isoform 13 of CD44 antigen;Isoform 14 of CD44 antigen;Isoform 15 of CD44 antigen;Isoform 16 of CD44 antigen;Isoform 17 of CD44 antigen;Isoform 18 of CD44 antigen;Isoform 3 of CD44 antigen;Isoform 4 of CD44 antigen;Isoform 5 of CD44 antigen;Isoform 6 of CD44 antigen;Isoform 7 of CD44 antigen;Isoform 8 of CD44 antigen;Isoform 9 of CD44 antigen	P16070;P16070-10;P16070-11;P16070-12;P16070-13;P16070-14;P16070-15;P16070-16;P16070-17;P16070-18;P16070-3;P16070-4;P16070-5;P16070-6;P16070-7;P16070-8;P16070-9	CD44	CD44
CD5 antigen-like	O43866	CD5L	CD5L
CD9 antigen	P21926	CD9	CD9
Cell surface glycoprotein MUC18	P43121	MCAM	MUC18
Ceramide transfer protein;Isoform 2 of Ceramide transfer protein;Isoform 3 of Ceramide transfer protein	Q9Y5P4;Q9Y5P4-2;Q9Y5P4-3	CERT	CERT
Ceruloplasmin	P00450	CP	CERU
Chloride intracellular channel protein 1	O00299	CLIC1	CLIC1
Cholesteryl ester transfer protein	P11597	CETP	CETP
Cholinesterase	P06276	BCHE	CHLE
Chromogranin-A	P10645	CHGA	CMGA
Clathrin heavy chain 1;Isoform 2 of Clathrin heavy chain 1	Q00610;Q00610-2	CLTC	CLH1
Coagulation factor IX	P00740	F9	FA9
Coagulation factor V	P12259	F5	FA5

Coagulation factor VII;Isoform B of Coagulation factor VII	P08709;P08709-2	F7	FA7
Coagulation factor X	P00742	F10	FA10
Coagulation factor XI	P03951	F11	FA11
Coagulation factor XII	P00748	F12	FA12
Coagulation factor XIII A chain	P00488	F13A1	F13A
Coagulation factor XIII B chain	P05160	F13B	F13B
Cofilin-1	P23528	CFL1	COF1
Collagen alpha-1(I) chain	P02452	COL1A1	CO1A1
Collagen alpha-1(III) chain	P02461	COL3A1	CO3A1
Collagen alpha-1(VI) chain	P12109	COL6A1	CO6A1
Collagen alpha-1(XVIII) chain;Isoform 2 of Collagen alpha-1(XVIII) chain;Isoform 3 of Collagen alpha-1(XVIII) chain	P39060;P39060-1;P39060-2	COL18A1	CO1A1
Collagen alpha-2(I) chain	P08123	COL1A2	CO1A2
Collagen alpha-3(VI) chain;Isoform 2 of Collagen alpha-3(VI) chain;Isoform 3 of Collagen alpha-3(VI) chain;Isoform 4 of Collagen alpha-3(VI) chain;Isoform 5 of Collagen alpha-3(VI) chain	P12111;P12111-2;P12111-3;P12111-4;P12111-5	COL6A3	CO6A3
Collectin-10	Q9Y6Z7	COLEC10	COL10

Collectin-11;Isoform 10 of Collectin-11;Isoform 2 of Collectin-11;Isoform 3 of Collectin-11;Isoform 4 of Collectin-11;Isoform 5 of Collectin-11;Isoform 6 of Collectin-11;Isoform 7 of Collectin-11;Isoform 8 of Collectin-11;Isoform 9 of Collectin-11	Q9BWP8;Q9BWP8-10;Q9BWP8-2;Q9BWP8-3;Q9BWP8-4;Q9BWP8-5;Q9BWP8-6;Q9BWP8-7;Q9BWP8-8;Q9BWP8-9	COLEC11	COL11
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Complement C1q subcomponent subunit A	P02745	C1QA	C1QA
Complement C1q subcomponent subunit B	P02746	C1QB	C1QB
Complement C1q subcomponent subunit C	P02747	C1QC	C1QC

Complement C1q tumor necrosis factor-related protein 3;Isoform 2 of Complement C1q tumor necrosis factor-related protein 3;Isoform 3 of Complement C1q tumor necrosis factor-related protein 3	Q9BXJ4;Q9BXJ4-2;Q9BXJ4-3	C1QTNF3	C1QT3
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Complement C1r subcomponent	P00736	C1R	C1R
Complement C1r subcomponent-like protein	Q9NZP8	C1RL	C1RL
Complement C1s subcomponent	P09871	C1S	C1S
Complement C2	P06681	C2	CO2
Complement C3	P01024	C3	CO3
Complement C4-A	P0C0L4	C4A	CO4A
Complement C4-B	P0C0L5	C4B	CO4B
Complement C5	P01031	C5	CO5
Complement component C6	P13671	C6	CO6

Complement component C7	P10643	C7	CO7
Complement component C8 alpha chain	P07357	C8A	CO8A
Complement component C8 beta chain	P07358	C8B	CO8B
Complement component C8 gamma chain	P07360	C8G	CO8G
Complement component C9	P02748	C9	CO9
Complement factor B	P00751	CFB	CFAB
Complement factor D	P00746	CFD	CFAD
Complement factor H	P08603	CFH	CFAH
Complement factor H-related protein 1	Q03591	CFHR1	FHR1
Complement factor H-related protein 2	P36980	CFHR2	FHR2
Complement factor H-related protein 3; Isoform 2 of Complement factor H-related protein 3	Q02985;Q02985-2	CFHR3	FHR3
Complement factor H-related protein 4; Isoform 2 of Complement factor H-related protein 4	Q92496;Q92496-2	CFHR4	FHR4
Complement factor H-related protein 5	Q9BXR6	CFHR5	FHR5
Complement factor I	P05156	CFI	CFAI
Conserved oligomeric Golgi complex subunit 4; Isoform 3 of Conserved oligomeric Golgi complex subunit 4	Q9H9E3;Q9H9E3-3	COG4	COG4
Contactin-1; Isoform 2 of Contactin-1	Q12860;Q12860-2	CNTN1	CNTN1
Corticosteroid-binding globulin	P08185	SERPINA6	CBG
C-reactive protein	P02741	CRP	CRP
Creatine kinase M-type	P06732	CKM	KCRM
Cystatin-C	P01034;P01034 A25S;P01034 B allele A25T;P01034 L94Q	CST3	CYTC

Cystatin-M	Q15828	CST6	CYTM
Cysteine-rich secretory protein 3;Isoform 2 of Cysteine-rich secretory protein 3;Isoform 3 of Cysteine-rich secretory protein 3	P54108;P54108-2;P54108-3	CRISP3	CRIS3
Dermcidin;Isoform 2 of Dermcidin	P81605;P81605-2	DCD	DCD
Desmocollin-1;Isoform 1B of Desmocollin-1	Q08554;Q08554-2	DSC1	DSC1
Desmoglein-1	Q02413	DSG1	DSG1
Desmoglein-2	Q14126	DSG2	DSG2
Desmoplakin;Isoform DPII of Desmoplakin;Isoform DSPIa of Desmoplakin	P15924;P15924-2;P15924-3	DSP	DESP
Di-N-acetylchitobiase	Q01459	CTBS	DIAC
Dipeptidase 2;Isoform 2 of Dipeptidase 2	Q9H4A9;Q9H4A9-2	DPEP2	DPEP2
Dopamine beta-hydroxylase	P09172	DBH	DOPO
Dystroglycan	Q14118	DAG1	DAG1
Ectonucleotide pyrophosphatase/phosphodiesterase family member 2;Isoform 2 of Ectonucleotide pyrophosphatase/phosphodiesterase family member 2;Isoform 3 of Ectonucleotide pyrophosphatase/phosphodiesterase family member 2	Q13822;Q13822-2;Q13822-3	ENPP2	ENPP2
EGF-containing fibulin-like extracellular matrix protein 1;Isoform 2 of EGF-containing fibulin-like extracellular matrix protein 1;Isoform 3 of EGF-containing fibulin-like extracellular matrix protein 1;Isoform 4 of EGF-containing fibulin-like extracellular matrix protein 1	Q12805;Q12805-2;Q12805-3;Q12805-4	EFEMP1	FBLN3

Elongation factor 1-alpha 1;Isoform 2 of Elongation factor 1-alpha 1;Elongation factor 1-alpha 2;Putative elongation factor 1-alpha-like 3	P68104;P68104-2;Q05639;Q5VTE0	EEF1A1;EEF1A1;EEF1A2;EEF1A1P5	EF1A1;EF1A1;EF1A2;EF1A3
Endoplasmic reticulum chaperone BiP	P11021	HSPA5	BIP
Endoplasmin	P14625	HSP90B1	ENPL
Endothelial protein C receptor	Q9UNN8	PROCR	EPCR
Ephrin type-A receptor 1	P21709	EPHA1	EPHA1
Eukaryotic translation initiation factor 5A-1;Isoform 2 of Eukaryotic translation initiation factor 5A-1;Eukaryotic translation initiation factor 5A-1-like;Eukaryotic translation initiation factor 5A-2	P63241;P63241-2;Q6IS14;Q9GZV4	EIF5A;EIF5A;EIF5AL1;EIF5A2	IF5A1;IF5A1;IF5AL;IF5A2
Extracellular matrix protein 1	Q16610	ECM1	ECM1
Extracellular superoxide dismutase [Cu-Zn]	P08294	SOD3	SODE
Far upstream element-binding protein 2;Far upstream element-binding protein 1;Isoform 2 of Far upstream element-binding protein 1	Q92945;Q96AE4;Q96AE4-2	KHSRP;FUBP1;FUBP1	FUBP2;FUBP1;FUBP1
Fatty acid-binding protein 5	Q01469	FABP5	FABP5
Fermitin family homolog 3;Isoform 2 of Fermitin family homolog 3	Q86UX7;Q86UX7-2	FERMT3	URP2
Fetuin-B	Q9UGM5	FETUB	FETUB
Fibrinogen alpha chain	P02671	FGA	FIBA
Fibrinogen beta chain	P02675	FGB	FIBB
Fibrinogen gamma chain	P02679	FGG	FIBG



Fibrinogen-like protein 1	Q08830	FGL1	FGL1
Fibulin-1	P23142	FBLN1	FBLN1
Fibulin-5	Q9UBX5	FBLN5	FBLN5
Ficolin-2	Q15485	FCN2	FCN2
Ficolin-3	O75636	FCN3	FCN3
Filaggrin	P20930	FLG	FILA
Filaggrin-2	Q5D862	FLG2	FILA2
Filamin-A;Isoform 2 of Filamin-A	P21333;P21333-2	FLNA	FLNA
Flavin reductase (NADPH)	P30043	BLVRB	BLVRB
Fructose-bisphosphate aldolase A	P04075	ALDOA	ALDOA
Fructose-bisphosphate aldolase B	P05062	ALDOB	ALDOB
Galectin-3-binding protein	Q08380	LGALS3BP	LG3BP
Gelsolin	P06396	GSN	GELS
Glucosidase 2 subunit beta;Isoform 2 of Glucosidase 2 subunit beta	P14314;P14314-2	PRKCSH	GLU2B
Glutathione peroxidase 3	P22352	GPX3	GPX3
Glyceraldehyde-3-phosphate dehydrogenase;Isoform 2 of Glyceraldehyde-3-phosphate dehydrogenase	P04406;P04406-2	GAPDH	G3P
Haptoglobin	P00738	HP	HPT
Haptoglobin-related protein	P00739	HPR	HPTR
Heat shock 70 kDa protein 1-like	P34931	HSPA1L	HS71L
Heat shock cognate 71 kDa protein	P11142	HSPA8	HSP7C
Hemoglobin subunit alpha	P69905	HBA1	HBA
Hemoglobin subunit beta	P68871	HBB	HBB
Hemoglobin subunit delta	P02042	HBD	HBD
Hemoglobin subunit epsilon	P02100	HBE1	HBE

Hemoglobin subunit gamma-1;Hemoglobin subunit gamma-2	P69891;P69892	HBG1;HBG2	HBG1;HBG2
Hemopexin	P02790	HPX	HEMO
Heparin cofactor 2	P05546	SERPIND1	HEP2
Hepatocyte growth factor activator	Q04756	HGFAC	HGFA
Hepatocyte growth factor-like protein	P26927	MST1	HGFL
Hepatocyte nuclear factor 3-alpha;Isoform 2 of Hepatocyte nuclear factor 3-alpha	P55317;P55317-2	FOXA1	FOXA1
Histidine-rich glycoprotein	P04196	HRG	HRG
Histone H2A type 1-B/E;Histone H2A.Z;Histone H2A type 1;Histone H2AX;Histone H2A type 1-D;Histone H2A type 2-C;Histone H2A type 2-A;Histone H2A.V;Isoform 2 of Histone H2A.V;Isoform 3 of Histone H2A.V;Isoform 4 of Histone H2A.V;Histone H2A type 3;Histone H2A type 1-C;Histone H2A type 1-H;Histone H2A type 1-A;Histone H2A type 1-J;Histone H2A.J;Isoform 2 of Histone H2A.J	P04908;P0C0S5;P0C0S8;P16104;P20671;Q16777;Q6F113;Q71UI9;Q71UI9-2;Q71UI9-3;Q71UI9-4;Q7L7L0;Q93077;Q96KK5;Q96QV6;Q99878;Q9BTM1;Q9BTM1-2	HIST1H2AB;H2AC4;H2AZ1;H2AC11;H2AFX;H2AC7;HIST2H2AC;HIST2H2AA3;H2AFV;H2AFV;H2AFV;HIS T3H2A;HIST1H2AC;HIST1H2AH;HIST1H2AA;H2AC14;H2AFJ	H2A1B;H2AZ;H2A1;H2AX;H2A1D;H2A2C;H2A2A;H2AV;H2AV;H2AV;H2AV;H2A3;H2A1C;H2A1H;H2A1A;H2A1J;H2AJ;H2AJ
Histone H2B type 1-K;Histone H2B type 1-J;Histone H2B type 1-O;Histone H2B type 1-B;Histone H2B type F-S;Histone H2B type 1-D;Histone H2B type 1-C/E/F/G/I;Histone H2B type 2-E;Histone H2B type 2-F;Isoform 2 of Histone H2B type 2-F;Histone H2B type 3-B;Histone H2B type 1-H;Histone H2B type 1-N;Histone H2B type 1-M;Histone H2B type 1-L	O60814;P06899;P23527;P33778;P57053;P58876;P62807;Q16778;Q5QNW6;Q5QNW6-2;Q8N257;Q93079;Q99877;Q99879;Q99880	HIST1H2BK;H2BC12;H2BC11;HIST1H2BO;HIST1H2BB;H2BFS;HIST1H2BD;H2BC4;HIST2H2BE;HIST2H2BF;HIST3H2BB;HIST1H2BH;H2BC15;H2BC14;H2BC13	H2B1K;H2B1J;H2B1O;H2B1B;H2BFS;H2B1D;H2B1C;H2B2E;H2B2F;H2B2F;H2B3B;H2B1H;H2B1N;H2B1M;H2B1L

Histone H4	P62805	HIST1H4E; H4C1	H4
HLA class I histocompatibility antigen, A alpha chain;Isoform 2 of HLA class I histocompatibility antigen, A alpha chain	P04439;P04439-2	HLA-A	HLAA
HLA class I histocompatibility antigen, B alpha chain	P01889	HLA-B	HLAB
Homeobox protein Nkx-2.5	P52952	NKX2-5	NKX25
Hornerin	Q86YZ3	HRNR	HORN
Hyaluronan-binding protein 2;Isoform 2 of Hyaluronan-binding protein 2	Q14520;Q14520-2	HABP2	HABP2
Hypoxia up-regulated protein 1	Q9Y4L1	HYOU1	HYOU1
ICOS ligand;Isoform 2 of ICOS ligand	O75144;O75144-2	ICOSLG	ICOSL
IgGFc-binding protein	Q9Y6R7	FCGBP	FCGBP
Immunoglobulin alpha-2 heavy chain	P0DOX2		IGA2
Immunoglobulin delta heavy chain	P0DOX3		IGD
Immunoglobulin epsilon heavy chain	P0DOX4		IGE
Immunoglobulin gamma-1 heavy chain	P0DOX5		IGG1
Immunoglobulin heavy constant alpha 1	P01876	IGHA1	IGHA1
Immunoglobulin heavy constant alpha 2	P01877	IGHA2	IGHA2
Immunoglobulin heavy constant delta;Isoform 2 of Immunoglobulin heavy constant delta	P01880;P01880-2	IGHD	IGHD
Immunoglobulin heavy constant gamma 2	P01859	IGHG2	IGHG2
Immunoglobulin heavy constant gamma 3	P01860	IGHG3	IGHG3
Immunoglobulin heavy constant gamma 4	P01861	IGHG4	IGHG4
Immunoglobulin heavy constant mu	P01871	IGHM	IGHM
Immunoglobulin heavy variable 1-18	A0A0C4DH31	IGHV1-18	HV118
Immunoglobulin heavy variable 1-2	P23083	IGHV1-2	HV102
Immunoglobulin heavy variable 1-24	A0A0C4DH33	IGHV1-24	HV124

Immunoglobulin heavy variable 1-3	A0A0C4DH29	IGHV1-3	HV103
Immunoglobulin heavy variable 1-45	A0A0A0MS14	IGHV1-45	HV145
Immunoglobulin heavy variable 1-46	P01743	IGHV1-46	HV146
Immunoglobulin heavy variable 1-69	P01742	IGHV1-69	HV169
Immunoglobulin heavy variable 1-69D	A0A0B4J2H0	IGHV1-69D	HV69D
Immunoglobulin heavy variable 1-8	P0DP01	IGHV1-8	HV108
Immunoglobulin heavy variable 2-26	A0A0B4J1V2	IGHV2-26	HV226
Immunoglobulin heavy variable 2-5	P01817	IGHV2-5	HV205
Immunoglobulin heavy variable 2-70	P01814	IGHV2-70	HV270
Immunoglobulin heavy variable 2-70D	A0A0C4DH43	IGHV2-70D	HV70D
Immunoglobulin heavy variable 3-13	P01766	IGHV3-13	HV313
Immunoglobulin heavy variable 3-15	A0A0B4J1V0	IGHV3-15	HV315
Immunoglobulin heavy variable 3-20	A0A0C4DH32	IGHV3-20	HV320
Immunoglobulin heavy variable 3-30;Immunoglobulin heavy variable 3-30-5	P01768;P0DP03	IGHV3-30;IGHV3-30-5	HV330;HVC05
Immunoglobulin heavy variable 3-49	A0A0A0MS15	IGHV3-49	HV349
Immunoglobulin heavy variable 3-53	P01767	IGHV3-53	HV353
Immunoglobulin heavy variable 3-64	A0A075B6Q5	IGHV3-64	HV364
Immunoglobulin heavy variable 3-64D	A0A0J9YX35	IGHV3-64D	HV64D
Immunoglobulin heavy variable 3-7	P01780	IGHV3-7	HV307
Immunoglobulin heavy variable 3-72	A0A0B4J1Y9	IGHV3-72	HV372
Immunoglobulin heavy variable 3-73	A0A0B4J1V6	IGHV3-73	HV373
Immunoglobulin heavy variable 3-74	A0A0B4J1X5	IGHV3-74	HV374
Immunoglobulin heavy variable 3-9;Immunoglobulin heavy variable 3-43D	P01782;P0DP04	IGHV3-9;IGHV3-43D	HV309;HV43D

Immunoglobulin heavy variable 4-28	A0A0C4DH34	IGHV4-28	HV428
Immunoglobulin heavy variable 4-34	P06331	IGHV4-34	HV434
Immunoglobulin heavy variable 4-4	A0A075B6R2	IGHV4-4	HV404
Immunoglobulin heavy variable 5-51	A0A0C4DH38	IGHV5-51	HV551
Immunoglobulin heavy variable 6-1	A0A0B4J1U7	IGHV6-1	HV601
Immunoglobulin J chain	P01591	JCHAIN	IGJ
Immunoglobulin kappa constant	P01834	IGKC	IGKC
Immunoglobulin kappa light chain	P0DOX7		IGK
Immunoglobulin kappa variable 1-12;Immunoglobulin kappa variable 1D-12	A0A0C4DH73;P01611	IGKV1-12;IGKV1D-12	KV112;KVD12
Immunoglobulin kappa variable 1-16	P04430	IGKV1-16	KV116
Immunoglobulin kappa variable 1-17	P01599	IGKV1-17	KV117
Immunoglobulin kappa variable 1-27	A0A075B6S5	IGKV1-27	KV127
Immunoglobulin kappa variable 1-39;Immunoglobulin kappa variable 1D-39	P01597;P04432	IGKV1-39;IGKV1D-39	KV139;KVD39
Immunoglobulin kappa variable 1-5	P01602	IGKV1-5	KV105
Immunoglobulin kappa variable 1-8	A0A0C4DH67	IGKV1-8	KV108
Immunoglobulin kappa variable 1D-13;Immunoglobulin kappa variable 1-13	A0A0B4J2D9;P0DP09	IGKV1D-13;IGKV1-13	KVD13;KV113
Immunoglobulin kappa variable 1D-16	P01601	IGKV1D-16	KVD16
Immunoglobulin kappa variable 1D-33;Immunoglobulin kappa variable 1-33	P01593;P01594	IGKV1D-33;IGKV1-33	KVD33;KV133
Immunoglobulin kappa variable 1D-8	A0A087WSZ0	IGKV1D-8	KVD08
Immunoglobulin kappa variable 2-28;Immunoglobulin kappa variable 2D-28	A0A075B6P5;P01615	IGKV2-28;IGKV2D-28	KV228;KVD28
Immunoglobulin kappa variable 2-29	A2NJV5	IGKV2-29	KV229

Immunoglobulin kappa variable 2-30	P06310	IGKV2-30	KV230
Immunoglobulin kappa variable 2-40;Immunoglobulin kappa variable 2D-40	A0A087WW87;P01614	IGKV2-40;IGKV2D-40	KV240;KVD40
Immunoglobulin kappa variable 2D-29	A0A075B6S2	IGKV2D-29	KVD29
Immunoglobulin kappa variable 3-11	P04433	IGKV3-11	KV311
Immunoglobulin kappa variable 3-15	P01624	IGKV3-15	KV315
Immunoglobulin kappa variable 3-20	P01619	IGKV3-20	KV320
Immunoglobulin kappa variable 3D-15	A0A087WSY6	IGKV3D-15	KVD15
Immunoglobulin kappa variable 3D-20	A0A0C4DH25	IGKV3D-20	KVD20
Immunoglobulin kappa variable 4-1	P06312	IGKV4-1	KV401
Immunoglobulin kappa variable 5-2	P06315	IGKV5-2	KV502
Immunoglobulin kappa variable 6D-21	A0A0A0MT36	IGKV6D-21	KVD21
Immunoglobulin lambda constant 2	P0DOY2	IGLC2	IGLC2
Immunoglobulin lambda constant 7	A0M8Q6	IGLC7	IGLC7
Immunoglobulin lambda variable 10-54	A0A075B6I4	IGLV10-54	LVX54
Immunoglobulin lambda variable 1-36	A0A0B4J1U3	IGLV1-36	LV136
Immunoglobulin lambda variable 1-40	P01703	IGLV1-40	LV140
Immunoglobulin lambda variable 1-44	P01699	IGLV1-44	LV144
Immunoglobulin lambda variable 1-47	P01700	IGLV1-47	LV147
Immunoglobulin lambda variable 1-51	P01701	IGLV1-51	LV151
Immunoglobulin lambda variable 2-11	P01706	IGLV2-11	LV211
Immunoglobulin lambda variable 2-14	P01704	IGLV2-14	LV214
Immunoglobulin lambda variable 2-18	A0A075B6J9	IGLV2-18	LV218
Immunoglobulin lambda variable 3-1	P01715	IGLV3-1	LV301

Immunoglobulin lambda variable 3-10	A0A075B6K4	IGLV3-10	LV310
Immunoglobulin lambda variable 3-12	A0A075B6K2	IGLV3-12	LV312
Immunoglobulin lambda variable 3-16	A0A075B6K0	IGLV3-16	LV316
Immunoglobulin lambda variable 3-19	P01714	IGLV3-19	LV319
Immunoglobulin lambda variable 3-21	P80748	IGLV3-21	LV321
Immunoglobulin lambda variable 3-25	P01717	IGLV3-25	LV325
Immunoglobulin lambda variable 3-9	A0A075B6K5	IGLV3-9	LV39
Immunoglobulin lambda variable 4-60	A0A075B6I1	IGLV4-60	LV460
Immunoglobulin lambda variable 4-69	A0A075B6H9	IGLV4-69	LV469
Immunoglobulin lambda variable 5-45	A0A087WSX0	IGLV5-45	LV545
Immunoglobulin lambda variable 6-57	P01721	IGLV6-57	LV657
Immunoglobulin lambda variable 7-46	A0A075B6I9	IGLV7-46	LV746
Immunoglobulin lambda variable 8-61	A0A075B6I0	IGLV8-61	LV861
Immunoglobulin lambda-1 light chain	P0DOX8		IGL1
Immunoglobulin lambda-like polypeptide 1	P15814	IGLL1	IGLL1
Immunoglobulin mu heavy chain	P0DOX6		IGM
Immunoglobulin superfamily containing leucine-rich repeat protein	O14498	ISLR	ISLR
Inhibin beta C chain	P55103	INHBC	INHBC
Insulin-like growth factor I;Isoform 2 of Insulin-like growth factor I;Isoform 3 of Insulin-like growth factor I;Isoform 4 of Insulin-like growth factor I	P05019;P05019-2;P05019-3;P05019-4	IGF1	IGF1
Insulin-like growth factor II;Isoform 2 of Insulin-like growth factor II;Isoform 3 of Insulin-like growth factor II	P01344;P01344-2;P01344-3	IGF2	IGF2
Insulin-like growth factor-binding protein 2	P18065	IGFBP2	IBP2

Insulin-like growth factor-binding protein 3;Isoform 2 of Insulin-like growth factor-binding protein 3	P17936;P17936-2	IGFBP3	IBP3
Insulin-like growth factor-binding protein 4	P22692	IGFBP4	IBP4
Insulin-like growth factor-binding protein 5	P24593	IGFBP5	IBP5
Insulin-like growth factor-binding protein 6	P24592	IGFBP6	IBP6
Insulin-like growth factor-binding protein 7;Isoform 2 of Insulin-like growth factor-binding protein 7	Q16270;Q16270-2	IGFBP7	IBP7
Insulin-like growth factor-binding protein complex acid labile subunit;Isoform 2 of Insulin-like growth factor-binding protein complex acid labile subunit	P35858;P35858-2	IGFALS	ALS
Integrin alpha-IIb	P08514	ITGA2B	ITA2B
Integrin beta-1;Isoform 2 of Integrin beta-1;Isoform 3 of Integrin beta-1;Isoform 4 of Integrin beta-1;Isoform 5 of Integrin beta-1	P05556;P05556-2;P05556-3;P05556-4;P05556-5	ITGB1	ITB1
Integrin beta-3	P05106	ITGB3	ITB3
Inter-alpha-trypsin inhibitor heavy chain H1	P19827	ITIH1	ITIH1
Inter-alpha-trypsin inhibitor heavy chain H2	P19823	ITIH2	ITIH2
Inter-alpha-trypsin inhibitor heavy chain H3;Isoform 2 of Inter-alpha-trypsin inhibitor heavy chain H3	Q06033;Q06033-2	ITIH3	ITIH3
Inter-alpha-trypsin inhibitor heavy chain H4	Q14624	ITIH4	ITIH4
Intercellular adhesion molecule 1	P05362	ICAM1	ICAM1
Intercellular adhesion molecule 2	P13598	ICAM2	ICAM2
Interleukin-1 receptor accessory protein;Isoform 2 of Interleukin-1 receptor accessory protein;Isoform 4 of Interleukin-1 receptor accessory protein	Q9NPH3;Q9NPH3-2;Q9NPH3-5	IL1RAP	IL1AP



Interleukin-6 receptor subunit beta;Isoform 3 of Interleukin-6 receptor subunit beta	P40189;P40189-3	IL6ST	IL6RB
Isocitrate dehydrogenase [NADP], mitochondrial;Isoform 2 of Isocitrate dehydrogenase [NADP], mitochondrial	P48735;P48735-2	IDH2	IDHP
Isoform 1 of Fibronectin	P02751-1	FN1	FINC
Isoform 2 of Alpha-1B-glycoprotein	P04217-2	A1BG	A1BG
Isoform 2 of Attractin	O75882-2	ATRN	ATRN
Isoform 2 of Inter-alpha-trypsin inhibitor heavy chain H4	Q14624-2	ITIH4	ITIH4
Isoform 2 of Mannan-binding lectin serine protease 1	P48740-2	MASP1	MASP1
Isoform 2 of Tropomyosin alpha-3 chain;Isoform 3 of Tropomyosin alpha-3 chain;Isoform 4 of Tropomyosin alpha-3 chain;Isoform 5 of Tropomyosin alpha-3 chain;Isoform 6 of Tropomyosin alpha-3 chain	P06753-2;P06753-3;P06753-4;P06753-5;P06753-6	TPM3	TPM3
Isoform 3 of Ligand-dependent corepressor	Q96JN0-3	LCOR	LCOR
Isoform 4 of Inter-alpha-trypsin inhibitor heavy chain H4	Q14624-4	ITIH4	ITIH4
Isoform 5 of Fibronectin	P02751-5	FN1	FINC
Isoform 6 of Clusterin	P10909-6	CLU	CLUS
Isoform 9 of Fibronectin	P02751-9	FN1	FINC
Isoform A of Megakaryocyte and platelet inhibitory receptor G6b;Isoform D of Megakaryocyte and platelet inhibitory receptor G6b	O95866-2;O95866-4	MPIG6B	G6B
Isoform C of Fibulin-1	P23142-4	FBLN1	FBLN1
Isoform C of Proteoglycan 4	Q92954-3	PRG4	PRG4
Isoform LMW of Kininogen-1	P01042-2	KNG1	KNG1
Junction plakoglobin	P14923	JUP	PLAK
Kallistatin	P29622	SERPINA4	KAIN
Keratin, type I cytoskeletal 10	P13645	KRT10	K1C10
Keratin, type I cytoskeletal 13	P13646	KRT13	K1C13
Keratin, type I cytoskeletal 14	P02533	KRT14	K1C14
Keratin, type I cytoskeletal 16	P08779	KRT16	K1C16
Keratin, type I cytoskeletal 17	Q04695	KRT17	K1C17

Keratin, type I cytoskeletal 9	P35527	KRT9	K1C9
Keratin, type II cuticular Hb6;Keratin, type II cuticular Hb3;Keratin, type II cuticular Hb5;Keratin, type II cuticular Hb1	O43790;P78385;P78386;Q14533	KRT86;KRT83;KRT85;KRT81	KRT86;KRT83;KRT85;KRT81
Keratin, type II cytoskeletal 1	P04264	KRT1	K2C1
Keratin, type II cytoskeletal 2 epidermal	P35908	KRT2	K22E
Keratin, type II cytoskeletal 4	P19013	KRT4	K2C4
Keratin, type II cytoskeletal 5	P13647	KRT5	K2C5
Keratin, type II cytoskeletal 6A	P02538	KRT6A	K2C6A
Keratin, type II cytoskeletal 6B	P04259	KRT6B	K2C6B
Keratin, type II cytoskeletal 78	Q8N1N4	KRT78	K2C78
Keratinocyte proline-rich protein	Q5T749	KPRP	KPRP
Killer cell immunoglobulin-like receptor 2DS5;Killer cell immunoglobulin-like receptor 2DS1	Q14953;Q14954	KIR2DS5;KIR2DS1	KI2S5;KI2S1
Kininogen-1	P01042	KNG1	KNG1
Lactotransferrin;Isoform DeltaLf of Lactotransferrin	P02788;P02788-2	LTF	TRFL
Latent-transforming growth factor beta-binding protein 1;Isoform Short of Latent-transforming growth factor beta-binding protein 1;Isoform 3 of Latent-transforming growth factor beta-binding protein 1;Isoform 4 of Latent-transforming growth factor beta-binding protein 1;Isoform 5 of Latent-transforming growth factor beta-binding protein 1	Q14766;Q14766-2;Q14766-3;Q14766-4;Q14766-5	LTBP1	LTBP1
Leucine-rich alpha-2-glycoprotein	P02750	LRG1	A2GL
Leukocyte immunoglobulin-like receptor subfamily A member 3;Isoform 3 of Leukocyte immunoglobulin-like receptor subfamily A member 3	Q8N6C8;Q8N6C8-3	LILRA3	LIRA3
LINE-1 type transposase domain-containing protein 1	Q5T7N2	L1TD1	LITD1
Lipopolysaccharide-binding protein	P18428	LBP	LBP

L-lactate dehydrogenase A chain;Isoform 3 of L-lactate dehydrogenase A chain;Isoform 4 of L-lactate dehydrogenase A chain	P00338;P00338-3;P00338-4	LDHA	LDHA
L-lactate dehydrogenase B chain	P07195	LDHB	LDHB
Low affinity immunoglobulin gamma Fc region receptor III-A	P08637	FCGR3A	FCG3A
L-selectin;Isoform 2 of L-selectin	P14151;P14151-2	SELL	LYAM1
Lumican	P51884	LUM	LUM
Lymphatic vessel endothelial hyaluronic acid receptor 1	Q9Y5Y7	LYVE1	LYVE1
Lysosome-associated membrane glycoprotein 1;Isoform 2 of Lysosome-associated membrane glycoprotein 1	P11279;P11279-2	LAMP1	LAMP1
Lysosome-associated membrane glycoprotein 2;Isoform LAMP-2B of Lysosome-associated membrane glycoprotein 2;Isoform LAMP-2C of Lysosome-associated membrane glycoprotein 2	P13473;P13473-2;P13473-3	LAMP2	LAMP2
Lysozyme C	P61626	LYZ	LYSC
Macrophage colony-stimulating factor 1 receptor	P07333	CSF1R	CSF1R
Macrophage mannose receptor 1	P22897	MRC1	MRC1
Macrophage receptor MARCO;Isoform 2 of Macrophage receptor MARCO	Q9UEW3;Q9UEW3-2	MARCO	MARCO
Mannan-binding lectin serine protease 1	P48740	MASP1	MASP1
Mannan-binding lectin serine protease 2	O00187	MASP2	MASP2
Mannose-binding protein C	P11226	MBL2	MBL2
Mannosyl-oligosaccharide 1,2-alpha-mannosidase IA	P33908	MAN1A1	MA1A1
Mast/stem cell growth factor receptor Kit;Isoform 2 of Mast/stem cell growth factor receptor Kit	P10721;P10721-2	KIT	KIT
Matrix Gla protein;Isoform 2 of Matrix Gla protein	P08493;P08493-2	MGP	MGP

Membrane primary amine oxidase	Q16853	AOC3	AOC3
Metal transporter CNNM4;Isoform 2 of Metal transporter CNNM4;Metal transporter CNNM2;Isoform 2 of Metal transporter CNNM2	Q6P4Q7;Q6P4Q7-2;Q9H8M5;Q9H8M5-2	CNNM4;CNNM4;CNNM2;CNNM2	CNNM4;CNNM4;CNNM2;CNNM2
Metalloproteinase inhibitor 2	P16035	TIMP2	TIMP2
Microtubule-associated protein 1S;Isoform 2 of Microtubule-associated protein 1S	Q66K74;Q66K74-2	MAP1S	MAP1S
Monocyte differentiation antigen CD14	P08571	CD14	CD14
Multimerin-1	Q13201	MMRN1	MMRN1
Multimerin-2	Q9H8L6	MMRN2	MMRN2
Multiple epidermal growth factor-like domains protein 9	Q9H1U4	MEGF9	MEGF9
Multiple inositol polyphosphate phosphatase 1	Q9UNW1	MINPP1	MINP1
Myelin basic protein;Isoform 2 of Myelin basic protein;Isoform 3 of Myelin basic protein;Isoform 4 of Myelin basic protein;Isoform 5 of Myelin basic protein;Isoform 6 of Myelin basic protein	P02686;P02686-2;P02686-3;P02686-4;P02686-5;P02686-6	MBP	MBP
Myosin light chain kinase, smooth muscle;Isoform 9 of Myosin light chain kinase, smooth muscle;Isoform 2 of Myosin light chain kinase, smooth muscle;Isoform 3A of Myosin light chain kinase, smooth muscle;Isoform 3B of Myosin light chain kinase, smooth muscle;Isoform 4 of Myosin light chain kinase, smooth muscle;Isoform Del-1790 of Myosin light chain kinase, smooth muscle;Isoform 5 of Myosin light chain kinase, smooth muscle;Isoform 7 of Myosin light chain kinase, smooth muscle	Q15746;Q15746-11;Q15746-2;Q15746-3;Q15746-4;Q15746-5;Q15746-6;Q15746-7;Q15746-9	MYLK	MYLK
Myosin light polypeptide 6;Isoform Smooth muscle of Myosin light polypeptide 6	P60660;P60660-2	MYL6	MYL6

Myosin regulatory light chain 12B;Myosin regulatory light chain 12A	O14950;P19105	MYL12B;MYL12A	ML12B;ML12A
Myosin regulatory light polypeptide 9	P24844	MYL9	MYL9
Myosin-9	P35579	MYH9	MYH9
N-acetylmuramoyl-L-alanine amidase	Q96PD5	PGLYRP2	PGRP2
NADH-cytochrome b5 reductase 3;Isoform 2 of NADH-cytochrome b5 reductase 3;Isoform 3 of NADH-cytochrome b5 reductase 3	P00387;P00387-2;P00387-3	CYB5R3	NB5R3
Neural cell adhesion molecule 1;Isoform 2 of Neural cell adhesion molecule 1;Isoform 3 of Neural cell adhesion molecule 1;Isoform 4 of Neural cell adhesion molecule 1	P13591;P13591-1;P13591-3;P13591-4	NCAM1	NCAM1
Neural cell adhesion molecule L1-like protein;Isoform 2 of Neural cell adhesion molecule L1-like protein	O00533;O00533-2	CHL1	NCHL1
Neurogranin	Q92686	NRGN	NEUG
Neuron navigator 2;Isoform 10 of Neuron navigator 2;Isoform 11 of Neuron navigator 2;Isoform 12 of Neuron navigator 2;Isoform 13 of Neuron navigator 2;Isoform 2 of Neuron navigator 2;Isoform 3 of Neuron navigator 2;Isoform 4 of Neuron navigator 2;Isoform 8 of Neuron navigator 2;Isoform 9 of Neuron navigator 2	Q8IVL1;Q8IVL1-10;Q8IVL1-11;Q8IVL1-12;Q8IVL1-13;Q8IVL1-2;Q8IVL1-3;Q8IVL1-4;Q8IVL1-8;Q8IVL1-9	NAV2	NAV2
Neuropilin-1;Isoform 2 of Neuropilin-1;Isoform 3 of Neuropilin-1	O14786;O14786-2;O14786-3	NRP1	NRP1
Neutrophil defensin 1;Neutrophil defensin 3	P59665;P59666	DEFA1;DEFA3	DEF1;DEF3
Noelin;Isoform 3 of Noelin;Isoform 5 of Noelin	Q99784;Q99784-3;Q99784-5	OLFM1	NOE1

NPC1-like intracellular cholesterol transporter 1;Isoform 2 of NPC1-like intracellular cholesterol transporter 1;Isoform 4 of NPC1-like intracellular cholesterol transporter 1	Q9UHC9;Q9UHC9-2;Q9UHC9-4	NPC1L1	NPCL1
Obscurin;Isoform 2 of Obscurin;Isoform 5 of Obscurin	Q5VST9;Q5VST9-2;Q5VST9-6	OBSCN	OBSCN
Oncoprotein-induced transcript 3 protein	Q8WWZ8	OIT3	OIT3
Oncostatin-M-specific receptor subunit beta;Isoform 2 of Oncostatin-M-specific receptor subunit beta	Q99650;Q99650-2	OSMR	OSMR
Pantetheinase	O95497	VNN1	VNN1
PDZ and LIM domain protein 1	O00151	PDLIM1	PDLI1
Peptidase inhibitor 16;Isoform 2 of Peptidase inhibitor 16	Q6UXB8;Q6UXB8-2	PI16	PI16
Peptidyl-prolyl cis-trans isomerase A	P62937	PPIA	PPIA
Periostin;Isoform 2 of Periostin;Isoform 3 of Periostin;Isoform 4 of Periostin;Isoform 5 of Periostin	Q15063;Q15063-2;Q15063-3;Q15063-4;Q15063-5	POSTN	POSTN
Peroxiredoxin-1	Q06830	PRDX1	PRDX1
Peroxiredoxin-2	P32119	PRDX2	PRDX2
Peroxiredoxin-6	P30041	PRDX6	PRDX6
Phosphatidylcholine-sterol acyltransferase	P04180	LCAT	LCAT
Phosphatidylinositol-glycan-specific phospholipase D	P80108	GPLD1	PHLD
Phospholipid transfer protein	P55058	PLTP	PLTP
Pigment epithelium-derived factor	P36955	SERPINF1	PEDF
Plasma kallikrein	P03952	KLKB1	KLKB1
Plasma protease C1 inhibitor;Isoform 3 of Plasma protease C1 inhibitor	P05155;P05155-3	SERPING1	IC1
Plasma serine protease inhibitor	P05154	SERPINA5	IPSP
Plasminogen	P00747	PLG	PLMN
Plasminogen-like protein A	Q15195	PLGLA	PLGA
Plastin-2	P13796	LCP1	PLSL
Platelet basic protein	P02775	PPBP	CXCL7
Platelet factor 4	P02776	PF4	PLF4
Platelet factor 4 variant	P10720	PF4V1	PF4V

Platelet glycoprotein Ib alpha chain	P07359	GP1BA	GP1BA
Platelet glycoprotein Ib beta chain;Isoform 2 of Platelet glycoprotein Ib beta chain	P13224;P13224-2	GP1BB	GP1BB
Platelet glycoprotein IX	P14770	GP9	GPIX
Platelet glycoprotein V	P40197	GP5	GPV
Pleckstrin	P08567	PLEK	PLEK
Plexin domain-containing protein 2	Q6UX71	PLXDC2	PXDC2
Plexin-B1;Isoform 2 of Plexin-B1;Isoform 3 of Plexin-B1	O43157;O43157-2;O43157-3	PLXNB1	PLXB1
Podocalyxin;Isoform 2 of Podocalyxin	O00592;O00592-2	PODXL	PODXL
Poliovirus receptor;Isoform Beta of Poliovirus receptor;Isoform Gamma of Poliovirus receptor;Isoform Delta of Poliovirus receptor	P15151;P15151-2;P15151-3;P15151-4	PVR	PVR
Polyamine-modulated factor 1-binding protein 1;Isoform 1 of Polyamine-modulated factor 1-binding protein 1;Isoform 3 of Polyamine-modulated factor 1-binding protein 1;Isoform 4 of Polyamine-modulated factor 1-binding protein 1	Q8TBY8;Q8TBY8-1;Q8TBY8-3;Q8TBY8-4	PMFBP1	PMFBP
Polymeric immunoglobulin receptor	P01833	PIGR	PIGR
Polyubiquitin-B;Polyubiquitin-C;Ubiquitin-40S ribosomal protein S27a;Ubiquitin-60S ribosomal protein L40	P0CG47;P0CG48;P62979;P62987	UBB;UBC;RPS27A;UBA52	UBB;UBC;RS27A;RL40
PRA1 family protein 3	O75915	ARL6IP5	PRAF3
Pregnancy zone protein	P20742	PZP	PZP
Pregnancy-specific beta-1-glycoprotein 9;Isoform 2 of Pregnancy-specific beta-1-glycoprotein 9	Q00887;Q00887-2	PSG9	PSG9
Pre-mRNA-processing factor 40 homolog B;Isoform 2 of Pre-mRNA-processing factor 40 homolog B;Isoform 3 of Pre-mRNA-processing factor 40 homolog B	Q6NWX9;Q6NWX9-2;Q6NWX9-3	PRPF40B	PR40B
Preylcysteine oxidase 1	Q9UHG3	PCYOX1	PCYOX

Probable non-functional immunoglobulin heavy variable 3-35	A0A0C4DH35	IGHV3-35	HV335
Probable non-functional immunoglobulin heavy variable 3-38	A0A0C4DH36	IGHV3-38	HV338
Probable non-functional immunoglobulin kappa variable 2D-24;Immunoglobulin kappa variable 2-24	A0A075B6R9;A0A0C4DH68	IGKV2D-24;IGKV2-24	KVD24;KV224
Probable non-functional immunoglobulin kappa variable 1-37;Probable non-functional immunoglobulin kappa variable 1D-37	A0A075B6S9;P0DSN7	IGKV1-37;IGKV1D-37	KV137;KVD37
Procollagen C-endopeptidase enhancer 1	Q15113	PCOLCE	PCOC1
Profilin-1	P07737	PFN1	PROF1
Progranulin;Isoform 2 of Progranulin;Isoform 3 of Progranulin	P28799;P28799-2;P28799-3	GRN	GRN
Prolactin-inducible protein	P12273	PIP	PIP
Proline-rich acidic protein 1;Isoform 2 of Proline-rich acidic protein 1;Isoform 3 of Proline-rich acidic protein 1;Isoform 4 of Proline-rich acidic protein 1	Q96NZ9;Q96NZ9-2;Q96NZ9-3;Q96NZ9-4	PRAP1	PRAP1
Prolow-density lipoprotein receptor-related protein 1	Q07954	LRP1	LRP1
Properdin	P27918	CFP	PROP
Proprotein convertase subtilisin/kexin type 9	Q8NBP7	PCSK9	PCSK9
Prosaposin;Isoform Sap-mu-6 of Prosaposin;Isoform Sap-mu-9 of Prosaposin	P07602;P07602-2;P07602-3	PSAP	SAP
Prostaglandin-H2 D-isomerase	P41222	PTGDS	PTGDS
Protein AMBP	P02760	AMBP	AMBP
Protein disulfide-isomerase A3	P30101	PDIA3	PDIA3
Protein MENT;Isoform 2 of Protein MENT	Q9BUN1;Q9BUN1-2	MENT	MENT
Protein S100-A8	P05109	S100A8	S10A8
Protein S100-A9	P06702	S100A9	S10A9
Protein Z-dependent protease inhibitor	Q9UK55	SERPINA10	ZPI
Prothrombin	P00734	F2	THRB
P-selectin	P16109	SELP	LYAM3



Pulmonary surfactant-associated protein B	P07988	SFTPB	PSPB
Purine nucleoside phosphorylase	P00491	PNP	PNPH
Pyruvate kinase PKM;Isoform M1 of Pyruvate kinase PKM	P14618;P14618-2	PKM	KPYM
Ras suppressor protein 1;Isoform 2 of Ras suppressor protein 1	Q15404;Q15404-2	RSU1	RSU1
Ras-related protein Rab-27B	O00194	RAB27B	RB27B
Ras-related protein Rap-1b;Isoform 3 of Ras-related protein Rap-1b	P61224;P61224-3	RAP1B	RAP1B
Receptor-type tyrosine-protein phosphatase eta;Isoform 2 of Receptor-type tyrosine-protein phosphatase eta	Q12913;Q12913-2	PTPRJ	PTPRJ
Receptor-type tyrosine-protein phosphatase F;Isoform 2 of Receptor-type tyrosine-protein phosphatase F	P10586;P10586-2	PTPRF	PTPRF
Receptor-type tyrosine-protein phosphatase gamma;Isoform 2 of Receptor-type tyrosine-protein phosphatase gamma	P23470;P23470-2	PTPRG	PTPRG
Reticulon-4;Isoform B of Reticulon-4;Isoform C of Reticulon-4;Isoform 6 of Reticulon-4;Isoform B2 of Reticulon-4;Isoform D of Reticulon-4	Q9NQC3;Q9NQC3-2;Q9NQC3-3;Q9NQC3-4;Q9NQC3-5;Q9NQC3-6	RTN4	RTN4
Retinoic acid receptor responder protein 2	Q99969	RARRES2	RARR2
Retinol-binding protein 4	P02753	RBP4	RET4
Ribonuclease 4	P34096	RNASE4	RNAS4
Ribonuclease pancreatic	P07998	RNASE1	RNAS1
Ribosomal RNA processing protein 1 homolog A	P56182	RRP1	RRP1
SAFB-like transcription modulator	Q9NWH9	SLTM	SLTM
Salivary acidic proline-rich phosphoprotein 1/2	P02810	PRH1	PRPC

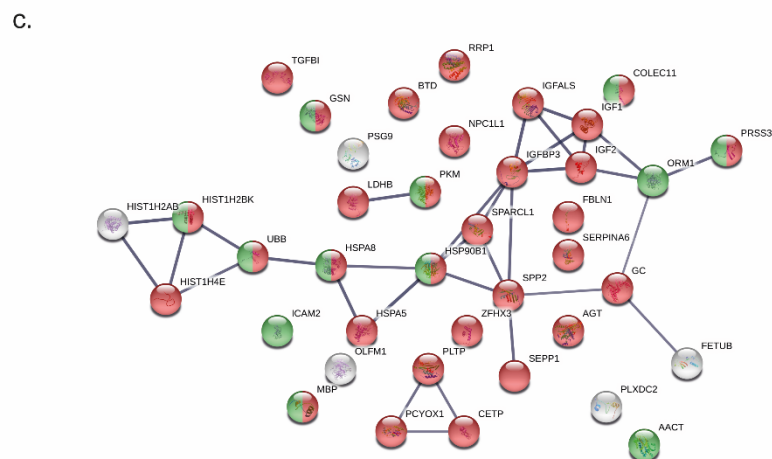
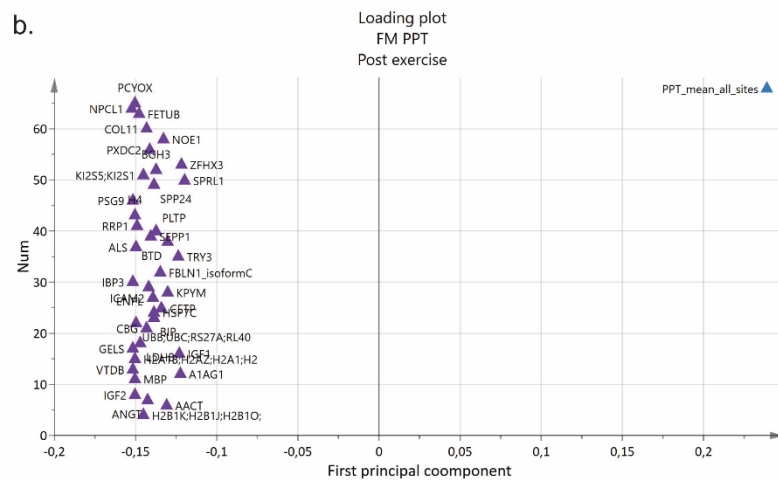
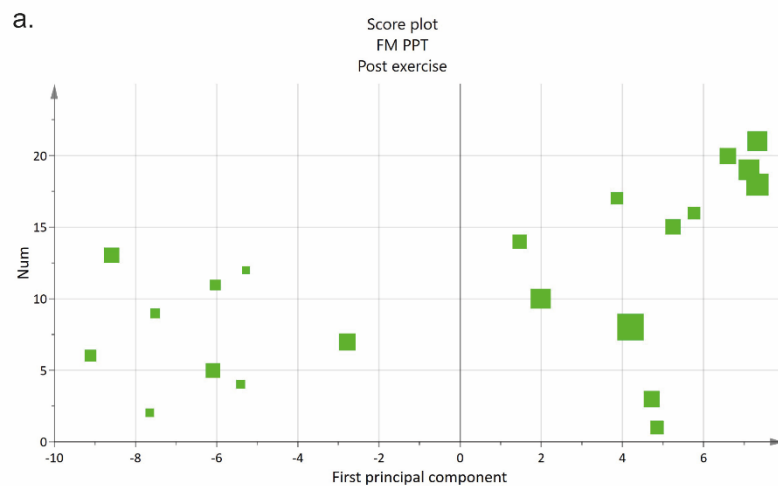
Scavenger receptor cysteine-rich type 1 protein M130;Isoform 2 of Scavenger receptor cysteine-rich type 1 protein M130;Isoform 3 of Scavenger receptor cysteine-rich type 1 protein M130;Isoform 4 of Scavenger receptor cysteine-rich type 1 protein M130	Q86VB7;Q86VB7-2;Q86VB7-3;Q86VB7-4	CD163	C163A
Secreted phosphoprotein 24	Q13103	SPP2	SPP24
Selenoprotein P	P49908	SELENOP	SEPP1
Semaphorin-5A	Q13591	SEMA5A	SEM5A
Semaphorin-6A;Isoform 2 of Semaphorin-6A	Q9H2E6;Q9H2E6-2	SEMA6A	SEM6A
Serine palmitoyltransferase 2;Serine palmitoyltransferase 3	O15270;Q9NUV7	SPTLC2;SPTLC3	SPTC2;SPTC3
Serine/threonine-protein kinase/endoribonuclease IRE1	O75460	ERN1	ERN1
Serotransferrin	P02787	TF	TRFE
Serpin A11	Q86U17	SERPINA11	SPA11
Serum albumin	P02768	ALB	ALBU
Serum amyloid A-1 protein	PODJI8	SAA1	SAA1
Serum amyloid A-2 protein	PODJI9	SAA2	SAA2
Serum amyloid A-4 protein	P35542	SAA4	SAA4
Serum amyloid P-component	P02743	APCS	SAMP
Serum paraoxonase/arylesterase 1	P27169	PON1	PON1
Serum paraoxonase/lactonase 3	Q15166	PON3	PON3
Sex hormone-binding globulin	P04278	SHBG	SHBG
SH3 domain-binding glutamic acid-rich-like protein 3	Q9H299	SH3BGL3	SH3L3
Small RNA 2'-O-methyltransferase	Q5T8I9	HENMT1	HENMT
Sodium- and chloride-dependent transporter XTRP3;Isoform 2 of Sodium- and chloride-dependent transporter XTRP3	Q9NP91;Q9NP91-2	SLC6A20	S6A20
Soluble scavenger receptor cysteine-rich domain-containing protein SSC5D	A1L4H1	SSC5D	SRCRL
Solute carrier family 2, facilitated glucose transporter member 3	P11169	SLC2A3	GTR3
SPARC	P09486	SPARC	SPRC
SPARC-like protein 1	Q14515	SPARCL1	SPRL1

Sulfhydryl oxidase 1	O00391	QSOX1	QSOX1
Superoxide dismutase [Cu-Zn]	P00441	SOD1	SODC
Talin-1	Q9Y490	TLN1	TLN1
Target of Nesh-SH3;Isoform 2 of Target of Nesh-SH3;Isoform 3 of Target of Nesh-SH3;Isoform 4 of Target of Nesh-SH3	Q7Z7G0;Q7Z7G0-2;Q7Z7G0-3;Q7Z7G0-4	ABI3BP	TARSH
Tenascin;Isoform 2 of Tenascin;Isoform 3 of Tenascin;Isoform 4 of Tenascin;Isoform 5 of Tenascin;Isoform 6 of Tenascin	P24821;P24821-2;P24821-3;P24821-4;P24821-5;P24821-6	TNC	TENA
Tenascin-X;Isoform 3 of Tenascin-X;Isoform 5 of Tenascin-X	P22105;P22105-1;P22105-4	TNXB	TENX
Tetranectin	P05452	CLEC3B	TETN
Thrombospondin-1	P07996	THBS1	TSP1
Thrombospondin-4	P35443	THBS4	TSP4
Thyroxine-binding globulin	P05543	SERPINA7	THBG
Tissue alpha-L-fucosidase	P04066	FUCA1	FUCO
Tissue factor pathway inhibitor;Isoform Beta of Tissue factor pathway inhibitor	P10646;P10646-2	TFPI	TFPI1
Transferrin receptor protein 1	P02786	TFRC	TFR1
Transforming growth factor-beta-induced protein ig-h3	Q15582	TGFBI	BGH3
Transgelin-2;Isoform 2 of Transgelin-2	P37802;P37802-2	TAGLN2	TAGL2
Trans-Golgi network integral membrane protein 2;Isoform TGN48 of Trans-Golgi network integral membrane protein 2;Isoform 4 of Trans-Golgi network integral membrane protein 2;Isoform 5 of Trans-Golgi network integral membrane protein 2;Isoform 7 of Trans-Golgi network integral membrane protein 2	O43493;O43493-3;O43493-4;O43493-5;O43493-7	TGOLN2	TGON2
Transthyretin	P02766	TTR	TTHY
Trem-like transcript 1 protein;Isoform 3 of Trem-like transcript 1 protein	Q86YW5;Q86YW5-3	TREML1	TRML1
Tropomyosin alpha-4 chain	P67936	TPM4	TPM4
Trypsin-1	P07477	PRSS1	TRY1

Trypsin-3;Isoform 2 of Trypsin-3;Isoform 3 of Trypsin-3;Isoform 4 of Trypsin-3;Isoform 5 of Trypsin-3	P35030;P35030-2;P35030-3;P35030-4;P35030-5	PRSS3	TRY3
Tubulin alpha-1B chain	P68363	TUBA1B	TBA1B
Tubulin alpha-4A chain;Isoform 2 of Tubulin alpha-4A chain	P68366;P68366-2	TUBA4A	TBA4A
Tubulin beta chain	P07437	TUBB	TBB5
Tubulin beta-1 chain	Q9H4B7	TUBB1	TBB1
Uncharacterized protein C16orf46;Isoform 2 of Uncharacterized protein C16orf46	Q6P387;Q6P387-2	C16orf46	CP046
Uncharacterized protein C19orf57;Isoform 2 of Uncharacterized protein C19orf57	Q0VDD7;Q0VDD7-2	C19orf57	CS057
Unconventional myosin-IXb;Isoform Short of Unconventional myosin-IXb	Q13459;Q13459-2	MYO9B	MYO9B
Uromodulin;Isoform 3 of Uromodulin;Isoform 4 of Uromodulin;Isoform 5 of Uromodulin	P07911;P07911-3;P07911-4;P07911-5	UMOD	UROM
Vascular cell adhesion protein 1	P19320	VCAM1	VCAM1
Vasorin	Q6EMK4	VASN	VASN
Vimentin	P08670	VIM	VIME
Vinculin;Isoform 1 of Vinculin	P18206;P18206-2	VCL	VINC
Vitamin D-binding protein;Isoform 3 of Vitamin D-binding protein	P02774;P02774-3	GC	VTDB
Vitamin K-dependent protein C;Isoform 2 of Vitamin K-dependent protein C	P04070;P04070-2	PROC	PROC
Vitamin K-dependent protein S	P07225	PROS1	PROS
Vitamin K-dependent protein Z;Isoform 2 of Vitamin K-dependent protein Z	P22891;P22891-2	PROZ	PROZ
Vitronectin	P04004	VTN	VTNC
von Willebrand factor	P04275	VWF	VWF
WD repeat-containing protein 1	O75083	WDR1	WDR1
Xaa-Pro dipeptidase;Isoform 2 of Xaa-Pro dipeptidase;Isoform 3 of Xaa-Pro dipeptidase	P12955;P12955-2;P12955-3	PEPD	PEPD
Zinc finger homeobox protein 3	Q15911	ZFHX3	ZFHX3

Zinc finger protein DPF3;Isoform 2 of Zinc finger protein DPF3;Isoform 3 of Zinc finger protein DPF3;Isoform 5 of Zinc finger protein DPF3	Q92784;Q92784-2;Q92784-3;Q92784-5	DPF3	DPF3
Zinc-alpha-2-glycoprotein	P25311	AZGP1	ZA2G
Zyxin	Q15942	ZYX	ZYX

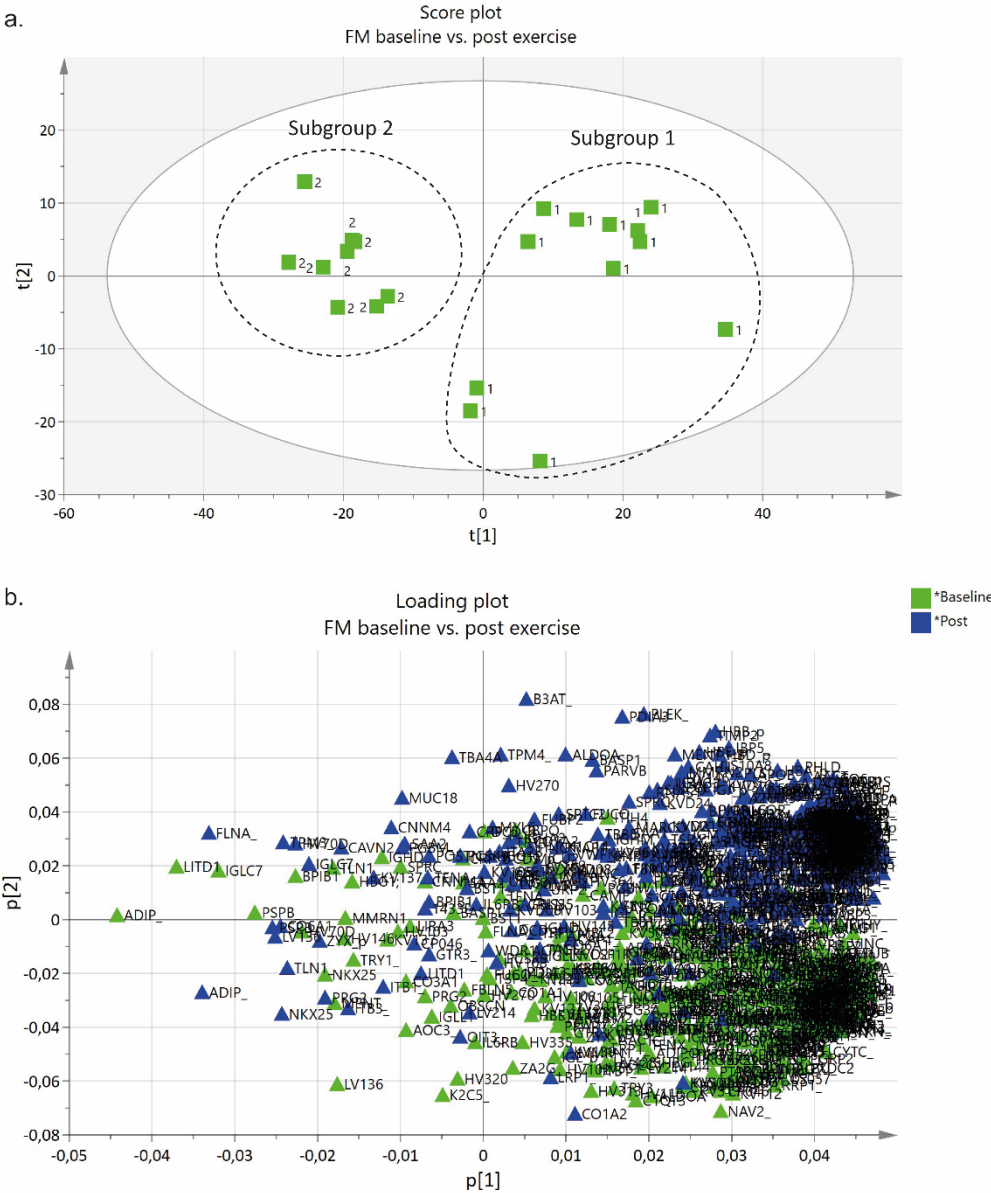
**SDC Fig. 1. OPLS model of PPT post exercise in FM, and STRING protein network.** **a)** Score plot showing group separation among FM based on PPT, the larger square the higher PPT score. **b)** Loading plot showing significant proteins with  $VIP \geq 1.0$ , and a  $p(\text{corr}) \geq 0.75$ . In total, 40 proteins were associated with low PPT in FM. **c)** Enriched protein network of significant proteins. The color nodes represent the following: red = metabolic process, and green = immune system process. Abbreviated protein names in loading plot and STRING network are stated in SDC Table 2. PPT: Pressure pain thresholds; FM: Fibromyalgia.



### **Potential subgroups of FM related to clinical characteristics and exercise variables**

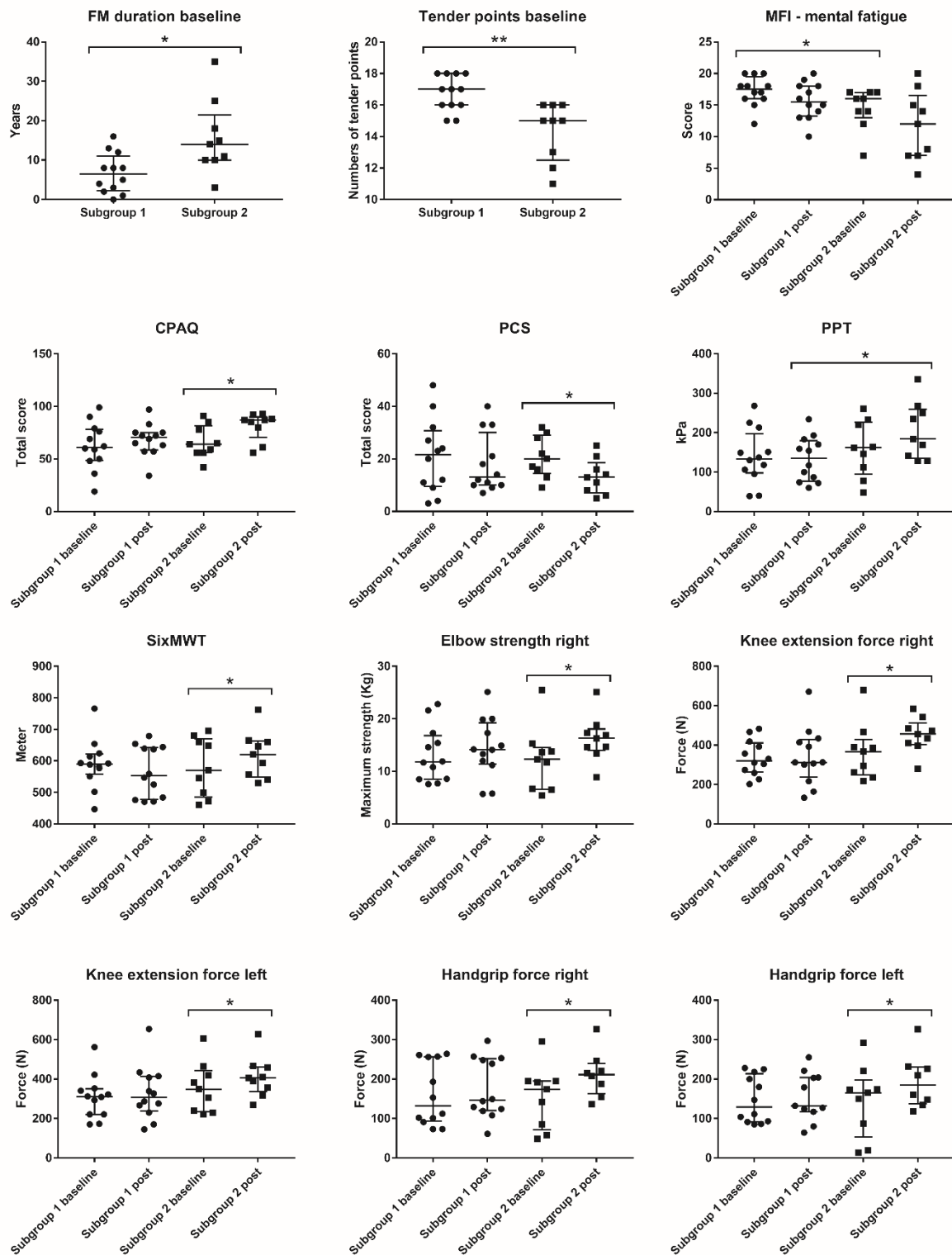
A within-group separation could be seen in the FM group both at baseline (Fig. 1 a, Score plot) and post exercise (Fig. 2 a, Score plot). To get an overview and compare the proteome profile at baseline and post exercise in FM alone, a PCA was performed including all proteins from both time points (SDC Fig. 2). The PCA consisted of two significant PCs with a  $R^2 = 0.53$  and  $Q^2 = 0.38$ . A clear separation in the plasma proteome profile was noted between baseline and post exercise (SDC Fig. 2b, loading plot) as well as a subgroup division within FM (SDC Fig. 2 a, score plot). To further evaluate the differences between the two subgroups of FM patients (classified as subgroup 1 and 2) seen in the PCA analysis (SDC Fig. 2, score plot) and in the score plots of the two OPLS-DA models (Fig. 1 and 2), background and exercise-related data were first compared. At baseline, significant differences existed between the two groups in FM duration, number of tender points, and mental fatigue (SDC Fig. 3). At post exercise, the two groups showed a significant difference in PPT. Hence, a significant improvement existed post exercise of the exercise-related variables SixMWT, knee extension force, handgrip force, and elbow strength (right side) in subgroup 2 but not in subgroup 1 of FM.

**SDC Fig. 2. PCA of comparative plasma proteomics baseline and post exercise in FM. a)** The score plot shows with-in group separation in FM performing resistance exercise. Two subgroups were identified and named subgroup 1 and subgroup 2. **b)** The loading plot shows all identified plasma proteins at baseline and post exercise. Abbreviated protein names in loading plot are stated in Supplementary Digital Content Table 2.





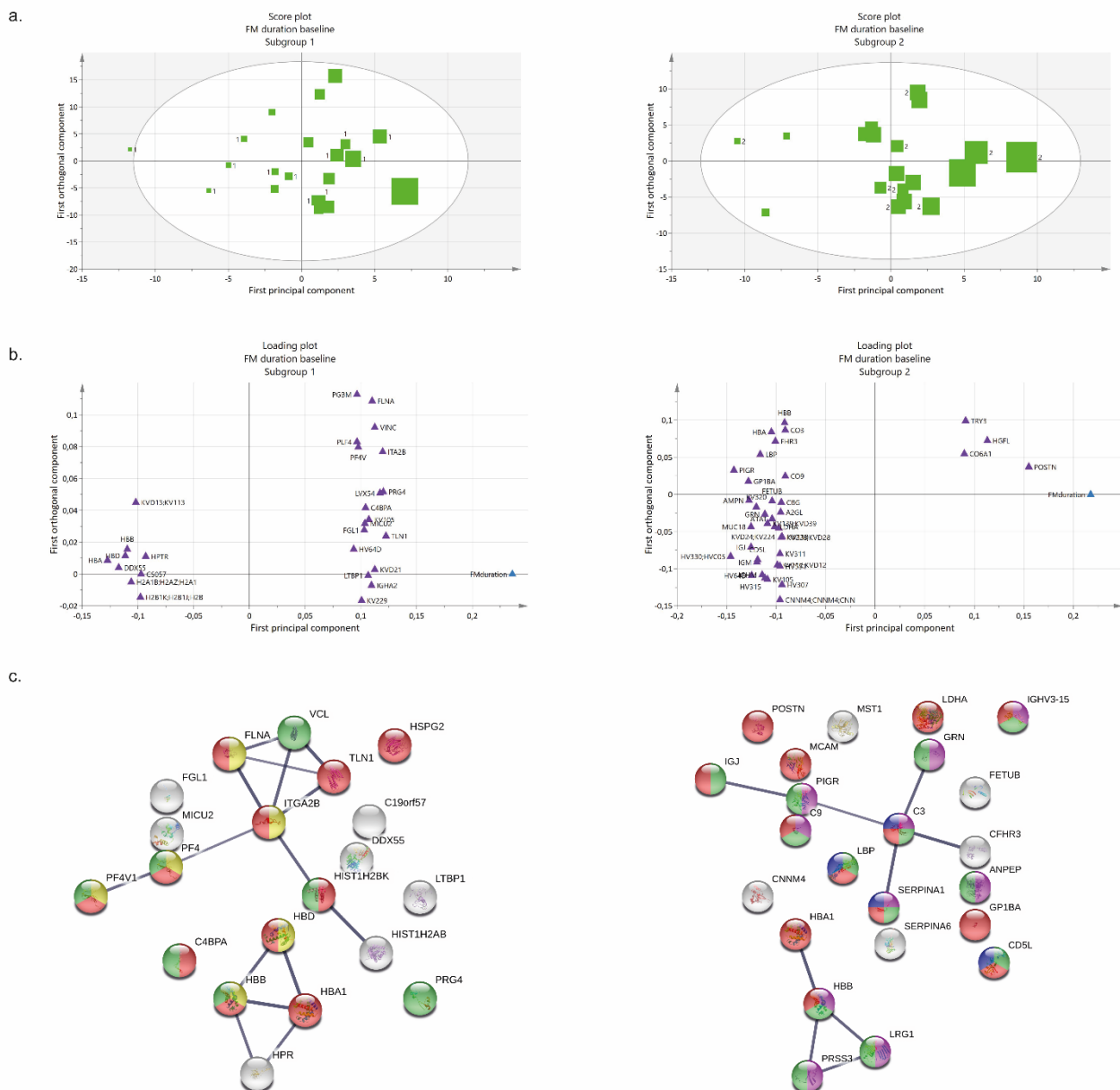
**SDC Fig. 3. Subgroup division in FM.** Background data and exercise-related variables of the two subgroups 1 and 2 based on score plot from PCA (SDC Fig. 2). MFI: Multidimensional Fatigue Inventory; CPAQ: Chronic pain acceptance questionnaire; PCS: Pain Catastrophizing Scale; PPT: Pressure pain thresholds; SixMWT: Six-minute walk test. \* =  $P < 0.05$ , \*\* =  $P < 0.01$



### **OPLS modeling of FM subgroups and FM duration at baseline**

When including all FM participants at baseline, the OPLS model was not significant (1 PC, 1 OC,  $R^2 = 0.67$ ,  $Q^2 = 0.39$ , CV-ANOVA  $P$ -value = 0.09). However, when dividing them according to the FM subdivision seen in the score plot of the OPLS-DA model (Fig. 1 a) and PCA analysis (SDC Fig. 2), both models were separately significant. The OPLS model including subgroup 1 with shorter FM duration (median (IQR), 8 (7.8) years) had the model statistics 1 PC, 2 OC,  $R^2 = 0.96$ ,  $Q^2 = 0.76$ , CV-ANOVA  $P$ -value = 0.001. The OPLS model including subgroup 2 with longer FM duration (Median (IQR), 15 (6) years) had 1 PC, 1 OC,  $R^2 = 0.92$ ,  $Q^2 = 0.50$ , CV-ANOVA  $P$ -value = 0.043 (SDC Fig. 4 a-b). The proteins associated with FM duration were different between the two subgroups. When comparing the two proteome profiles for FM duration using STRING analysis, both models had significantly enriched protein networks (Subgroup 1 PPI enrichment  $P$ -value =  $1.59e-08$ , subgroup 2 PPI enrichment  $P$ -value =  $2.28e-06$ ) with a local average clustering coefficient of 0.432 (subgroup 1) and 0.783 (subgroup 2). Several biological processes with an FDR < 0.05 were present and both networks had proteins related to stress. In subgroup 1 (shorter FM duration) the proteins were further involved in blood coagulation and immune response, whereas in subgroup 2 (longer FM duration) the proteins were involved in leucocyte-mediated immunity, immune system process, and inflammatory response (SDC Fig. 4 c). No significant models were obtained when regressing the knee extension force or handgrip force variables for all FM or when divided into subgroups at baseline.

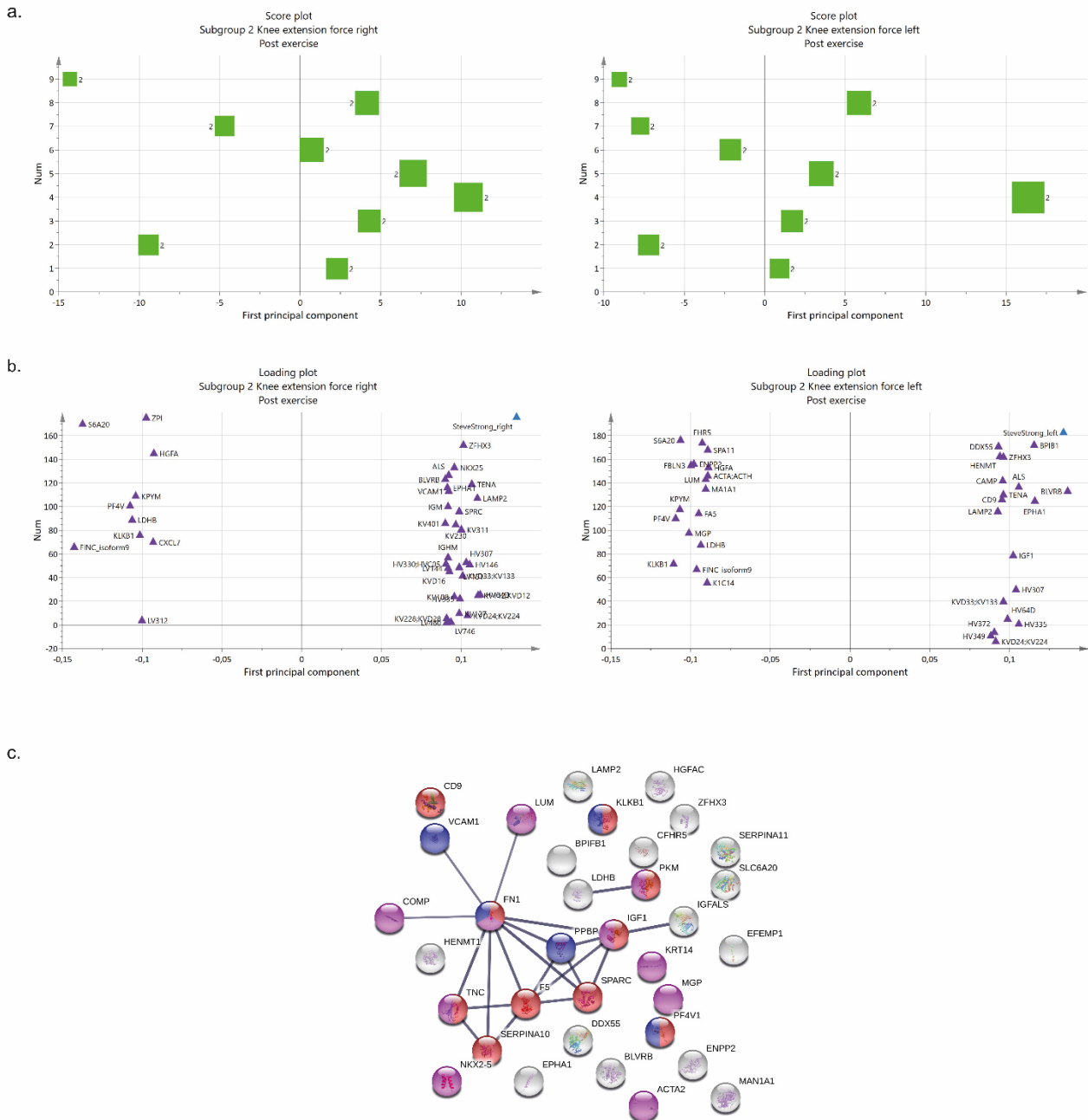
**SDC Fig. 4. Subgroup division of FM duration at baseline.** OPLS models of FM duration and significant plasma proteins of respective FM subgroup. The subgroup division is based on the score plot of the OPLS-DA model at baseline (Fig. 1 a, upper right quadrant = subgroup 1, and lower right quadrant = subgroup 2). **a)** In the score plot of respective subgroup, the larger the square the longer FM duration. Numbers 1 and 2 shows participant who have performed resistance exercise and which are included in the subgroup division seen in the PCA score plot in SDC Fig. 2 a. **b)** Loading plot of each FM subgroup showing significant protein with VIPpred  $\geq 1.2$  and  $p(\text{corr}) \geq 0.4$ . **c)** Protein network of significant proteins from respective subgroup. The color nodes in subgroup 1 represents: Red = response to stress, yellow = blood coagulation, green = immune response. For subgroup 2 the colored nodes represent: Green = immune system process, blue = inflammatory response, red = response to stress, purple = leucocyte-mediated immunity. Abbreviated protein names in loading plots and STRING networks are explained in SDC Table 2.



### **OPLS modeling of FM subgroups knee extension force post exercise**

Two significant OPLS models were obtained when investigating subgroup 2 and regression of knee extension force. The model statistics for knee extension force right side were 1 PC,  $R^2 = 0.85$ ,  $Q^2 = 0.72$ , CV-ANOVA P-value = 0.028. The proteins with highest VIPpred ( $\geq 1.42$ ) and  $p(\text{corr}) (\geq 0.82)$  were Isoform 9 of Fibronectin, Sodium- and chloride-dependent transporter XTRP3, Lysosome-associated membrane glycoprotein 2, Platelet factor 4 variant, Tenascin and L-lactate dehydrogenase B chain, and two forms of immunoglobulins. For the left side, the model statistics were 1 PC,  $R^2 = 0.87$ ,  $Q^2 = 0.70$ , CV-ANOVA P-value = 0.046 (SDC Fig. 5 a-b). The proteins with the highest VIPpred ( $\geq 1.44$ ) and  $p(\text{corr}) (\geq 0.72)$  were Flavin reductase (NADPH), Ephrin type-A receptor 1, BPI fold-containing family B member 1, Plasma kallikrein, Platelet factor 4 variant, Pyruvate kinase PKM, Sodium- and chloride-dependent transporter XTRP3, and Insulin-like growth factor-binding protein complex acid labile subunit. To get an overview of which protein processes were involved in the knee extension force models post exercise in FM, all significant proteins from both models were submitted to STRING analysis. In total, 34 proteins were detected, resulting in a significantly enriched network (PPI enrichment P-value =  $1.41e-09$ ) with an average local cluster coefficient of 0.34. Several biological processes with an FDR < 0.05 were identified, including wound healing, tissue development, and inflammatory response (SDC Fig. 5 c).

**SDC Fig. 5. OPLS models of knee extension force post exercise subgroup 2 including protein network.** **a)** Score blot of knee extension force mean right and left side for subgroup 2 (with longer FM duration). The larger the square, the higher knee extension force. **b)** Loading plots of significant proteins with VIPpred  $\geq 1.2$  and  $p(\text{corr}) \geq 0.66$  from each model. **c)** STRING Protein network including all significant proteins from the OPLS model of both right and left side of knee extension force. The colored nodes represent red = wound healing, purple = tissue generation, and blue = inflammatory response. Abbreviated protein names in loading plots and STRING networks are found in SDC Table 2.



## References

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