

Table S1. Proteins identified by LC-MS/MS analyzed for global sex difference, global minocycline effect and the interaction effect between sex and minocycline treatment

Protein information				ANOVA	Global sex difference		Global minocycline difference		Interaction Effect	
uniProt Identifier	uniProtKB	Protein names	Gene names	q-values	((MalesH + MalesHM) - (FemalesH + FemalesHM))	p-values	((MalesHM + FemalesHM) - (MalesH + FemalesH))	p-values	Sex difference x minocycline difference	p-values
PYR1_MOUSE	B2RQC6	CAD protein [Includes: Glutamine-dependent carbamoyl-phosphate synthase (EC 6.3.5.5); Aspartate carbamoyltransferase (EC 2.1.3.2); Dihydroorotase (EC 3.5.2.3)]	Cad	7,94E-03	0,82	3,09E-04	0,46	2,47E-02	0,72	6,84E-02
FIBA_MOUSE	E9PV24	Fibrinogen alpha chain [Cleaved into: Fibrinopeptide A; Fibrinogen alpha chain]	Fga	2,55E-02	0,19	5,83E-03	0,11	7,91E-02	0,32	1,61E-02
KNG1_MOUSE	O08677	Kininogen-1 [Cleaved into: Kininogen-1 heavy chain; Bradykinin; Kininogen-1 light chain]	Kng1 Kng	1,13E-02	0,14	2,01E-01	0,40	9,17E-04	0,57	1,22E-02
IMPA1_MOUSE	O55023	Inositol monophosphatase 1 (IMP 1) (IMPase 1) (EC 3.1.3.25) (D-galactose 1-phosphate phosphatase) (EC 3.1.3.94) (Inositol-1(or 4)-monophosphatase 1) (Lithium-sensitive myo-inositol monophosphatase A1)	Impa1	1,56E-03	0,05	1,31E-02	-0,07	2,24E-03	-0,15	1,28E-03
CO3_MOUSE	P01027	Complement C3 (HSE-MSF) [Cleaved into: Complement C3 beta chain; C3-beta-c (C3bc); Complement C3 alpha chain; C3a anaphylatoxin; Acylation stimulating protein (ASP) (C3adesArg); Complement C3b alpha' chain; Complement C3c alpha' chain fragment 1; Complement C3dg fragment; Complement C3g fragment; Complement C3d fragment; Complement C3f fragment; Complement C3c alpha' chain fragment 2]	C3	1,67E-02	0,01	8,71E-01	0,20	1,62E-03	0,33	8,39E-03
CO4B_MOUSE	P01029	Complement C4-B [Cleaved into: Complement C4 beta chain; Complement C4 alpha chain; C4a anaphylatoxin; Complement C4 gamma chain]	C4b C4	1,91E-02	0,00	9,88E-01	0,02	6,57E-01	0,39	6,21E-04
HBA_MOUSE	P01942	Hemoglobin subunit alpha (Alpha-globin) (Hemoglobin alpha chain)	Hba Hba-a1	1,73E-03	0,79	9,14E-06	0,28	4,77E-02	0,08	7,55E-01
HBB1_MOUSE	P02088	Hemoglobin subunit beta-1 (Beta-1-globin) (Hemoglobin beta-1 chain) (Hemoglobin beta-major chain)	Hbb-b1	1,07E-02	0,63	9,49E-05	0,28	4,15E-02	0,11	6,80E-01
B3AT_MOUSE	P04919	Band 3 anion transport protein (Anion exchange protein 1) (AE 1) (Anion exchanger 1) (MEB3) (Solute carrier family 4 member 1) (CD antigen CD233)	Slc4a1 Ae1	2,55E-02	0,38	1,68E-04	0,10	2,21E-01	0,07	6,76E-01
APOA4_MOUSE	P06728	Apolipoprotein A-IV (Apo-AIV) (ApoA-IV) (Apolipoprotein A4)	Apoa4	6,43E-03	0,18	1,35E-02	0,26	1,08E-03	0,35	1,87E-02
SPRC_MOUSE	P07214	SPARC (Basement-membrane protein 40) (BM-40) (Osteonectin) (ON) (Secreted protein acidic and rich in cysteine)	Sparc	4,34E-02	0,04	4,33E-01	0,01	9,07E-01	0,39	1,21E-03
ALBU_MOUSE	P07724	Serum albumin	Alb Alb-1 Alb1	8,72E-03	0,08	5,04E-01	0,58	1,50E-04	0,55	3,73E-02
SPA3K_MOUSE	P07759	Serine protease inhibitor A3K (Serpin A3K) (Contrapsin) (SPI-2)	Serpina3k Mcm2 Spi2	1,69E-06	0,93	2,27E-08	0,44	4,76E-04	0,77	1,55E-03
NFM_MOUSE	P08553	Neurofilament medium polypeptide (NF-M) (160 kDa neurofilament protein) (Neurofilament 3) (Neurofilament triplet M protein)	Nefm Nef3 Nfm	3,67E-02	0,18	1,73E-04	0,01	7,74E-01	-0,04	5,96E-01
HSPB1_MOUSE	P14602	Heat shock protein beta-1 (HspB1) (Growth-related 25 kDa protein) (Heat shock 25 kDa protein) (HSP 25) (Heat shock 27 kDa protein) (HSP 27) (p25)	Hspb1 Hsp25 Hsp27	2,03E-03	-0,05	4,48E-01	0,08	2,25E-01	0,61	8,60E-05
GRP78_MOUSE	P20029	78 kDa glucose-regulated protein (GRP-78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 Grp78	7,58E-03	0,00	1,00E+00	0,04	1,06E-01	0,22	3,36E-04

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HEXB_MOUSE	P20060	Beta-hexosaminidase subunit beta (EC 3.2.1.52) (Beta-N-acetylhexosaminidase subunit beta) (Hexosaminidase subunit B) (N-acetyl-beta-glucosaminidase subunit beta)	Hexb	3,15E-03	-0,09	2,69E-02	0,06	1,56E-01	0,32	3,56E-04
VTDB_MOUSE	P21614	Vitamin D-binding protein (DBP) (VDB) (Gc-globulin) (Group-specific component)	Gc	1,91E-02	0,28	6,91E-02	0,42	8,59E-03	0,84	8,30E-03
PENK_MOUSE	P22005	Proenkephalin-A [Cleaved into: Synenkephalin; Met-enkephalin (Opioid growth factor) (OGF); PENK(114-133); PENK(143-184); Met-enkephalin-Arg-Ser-Leu; Leu-enkephalin; PENK(238-259); Met-enkephalin-Arg-Phe]	Penk Penk1	1,85E-02	0,25	9,68E-05	-0,04	4,13E-01	0,08	4,13E-01
A1AT2_MOUSE	P22599	Alpha-1-antitrypsin 1-2 (AAT) (Alpha-1 protease inhibitor 2) (Alpha-1-antiproteinase) (Serine protease inhibitor 1-2) (Serine protease inhibitor A1b) (Serpina A1b)	Serpina1b Aat2 Dom2 Spi1-2	4,34E-02	0,25	9,52E-02	0,49	2,31E-03	0,55	6,80E-02
RS2_MOUSE	P25444	40S ribosomal protein S2 (40S ribosomal protein S4) (Protein LLRep3)	Rps2 Llrep3 Rps4	1,93E-02	-0,02	5,44E-01	0,00	9,92E-01	0,21	6,72E-04
EZRI_MOUSE	P26040	Ezrin (Cytovillin) (Villin-2) (p81)	Ezr Vil2	1,56E-03	-0,06	3,60E-02	0,07	2,31E-02	0,25	2,37E-04
PDIA3_MOUSE	P27773	Protein disulfide-isomerase A3 (EC 5.3.4.1) (58 kDa glucose-regulated protein) (58 kDa microsomal protein) (p58) (Disulfide isomerase ER-60) (Endoplasmic reticulum resident protein 57) (ER protein 57) (ERp57) (Endoplasmic reticulum resident protein 60) (ER protein 60) (ERp60)	Pdia3 Erp Erp60 Grp58	1,73E-02	-0,01	6,90E-01	0,04	1,24E-01	0,18	8,48E-04
SEPT4_MOUSE	P28661	Septin-4 (Brain protein H5) (Peanut-like protein 2)	Sept4 Pnutl2	2,17E-02	-0,01	6,00E-01	-0,04	9,80E-02	-0,17	1,37E-03
FETUA_MOUSE	P29699	Alpha-2-HS-glycoprotein (Countertrypsin) (Fetuin-A)	Ahsg Fetua	1,56E-03	0,08	4,66E-01	0,48	4,09E-04	0,87	1,09E-03
VTNC_MOUSE	P29788	Vitronectin (VN) (S-protein) (Serum-spreading factor)	Vtn	1,56E-03	0,17	4,89E-05	0,15	1,68E-04	0,16	1,56E-02
APOC1_MOUSE	P34928	Apolipoprotein C-I (Apo-CI) (ApoC-I) (Apolipoprotein C1) [Cleaved into: Truncated apolipoprotein C-I]	Apoc1	6,27E-04	0,75	5,86E-06	0,36	8,40E-03	0,46	7,34E-02
COIA1_MOUSE	P39061	Collagen alpha-1(XVIII) chain [Cleaved into: Endostatin]	Col18a1	8,03E-03	0,25	2,01E-04	0,14	2,10E-02	0,16	1,52E-01
EF2_MOUSE	P58252	Elongation factor 2 (EF-2)	Eef2	1,93E-02	0,00	9,25E-01	0,03	2,48E-01	0,19	8,24E-04
RS8_MOUSE	P62242	40S ribosomal protein S8	Rps8	1,56E-03	-0,03	2,77E-01	0,05	1,24E-01	0,29	8,19E-05
RS12_MOUSE	P63323	40S ribosomal protein S12	Rps12	4,55E-02	-0,04	3,36E-01	0,06	9,10E-02	0,24	3,46E-03
APOA1_MOUSE	Q00623	Apolipoprotein A-I (Apo-AI) (ApoA-I) (Apolipoprotein A1) [Cleaved into: Proapolipoprotein A-I (ProapoA-I); Truncated apolipoprotein A-I]	Apoa1	8,60E-04	0,54	2,26E-05	0,32	3,74E-03	0,39	6,11E-02
A1AT4_MOUSE	Q00897	Alpha-1-antitrypsin 1-4 (Alpha-1 protease inhibitor 4) (Serine protease inhibitor 1-4) (Serine protease inhibitor A1d) (Serpina A1d)	Serpina1d Dom4 Spi1-4	1,24E-02	0,25	3,87E-02	0,43	1,05E-03	0,52	3,15E-02
A1AT5_MOUSE	Q00898	Alpha-1-antitrypsin 1-5 (Alpha-1 protease inhibitor 5) (Serine protease inhibitor 1-5) (Serine protease inhibitor A1e) (Serpina A1e)	Serpina1e Dom5 Spi1-5	1,15E-07	1,87	1,53E-10	0,56	1,85E-03	0,92	8,12E-03
CLUS_MOUSE	Q06890	Clusterin (Apolipoprotein J) (Apo-J) (Clustrin) (Sulfated glycoprotein 2) (SGP-2) [Cleaved into: Clusterin beta chain; Clusterin alpha chain]	Clu Apoj Msgp-2	1,76E-04	0,12	2,94E-03	0,10	1,22E-02	0,39	3,43E-05

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CALB2_MOUSE	Q08331	Calretinin (CR)	Calb2	2,16E-02	0,16	7,46E-04	-0,03	4,84E-01	-0,18	3,38E-02
PADI2_MOUSE	Q08642	Protein-arginine deiminase type-2 (EC 3.5.3.15) (Peptidylarginine deiminase II) (Protein-arginine deiminase type II)	Padi2 Pad2 Pdi Pdi2	4,20E-02	0,02	6,48E-01	-0,01	7,48E-01	-0,30	1,34E-03
MYO1D_MOUSE	Q5SYD0	Unconventional myosin-Id	Myo1d	2,55E-02	0,03	1,18E-01	-0,03	5,74E-02	-0,10	3,46E-03
CD166_MOUSE	Q61490	CD166 antigen (Activated leukocyte cell adhesion molecule) (BEN) (Protein DM-GRASP) (CD antigen CD166)	Alcam	4,20E-02	-0,09	1,35E-03	-0,03	1,75E-01	-0,09	7,62E-02
GDIB_MOUSE	Q61598	Rab GDP dissociation inhibitor beta (Rab GDI beta) (GDI-3) (Guanosine diphosphate dissociation inhibitor 2) (GDI-2)	Gdi2 Gdi3	4,89E-02	0,10	3,69E-04	-0,03	2,24E-01	-0,02	5,99E-01
HPT_MOUSE	Q61646	Haptoglobin (Zonulin) [Cleaved into: Haptoglobin alpha chain; Haptoglobin beta chain]	Hp	2,74E-05	0,84	9,02E-06	0,47	3,61E-03	1,34	1,48E-04
PZP_MOUSE	Q61838	Pregnancy zone protein (Alpha-2-macroglobulin) (Alpha-2-M) [Cleaved into: Alpha-2-macroglobulin 165 kDa subunit; Alpha-2-macroglobulin 35 kDa subunit]	Pzp A2m	1,56E-03	0,33	6,61E-05	0,23	2,29E-03	0,19	1,55E-01
CSPG2_MOUSE	Q62059	Versican core protein (Chondroitin sulfate proteoglycan core protein 2) (Chondroitin sulfate proteoglycan 2) (Large fibroblast proteoglycan) (PG-M)	Vcan Cspg2	8,60E-04	-0,02	1,01E-01	-0,05	3,52E-04	-0,10	5,19E-04
DDX3X_MOUSE	Q62167	ATP-dependent RNA helicase DDX3X (EC 3.6.4.13) (D1Pas1-related sequence 2) (DEAD box RNA helicase DEAD3) (mDEAD3) (DEAD box protein 3, X-chromosomal) (Embryonic RNA helicase)	Ddx3x D1Pas1-rs2 Ddx3 Dead3 Erh	6,27E-04	-0,29	8,08E-07	0,02	7,15E-01	0,06	4,97E-01
IF4G1_MOUSE	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	3,61E-03	0,00	8,57E-01	0,02	2,00E-01	0,15	1,45E-04
VAT1L_MOUSE	Q80TB8	Synaptic vesicle membrane protein VAT-1 homolog-like (EC 1.-.-.-)	Vat1l Kiaa1576	3,58E-02	0,16	3,07E-03	0,04	4,12E-01	0,24	1,87E-02
FIBB_MOUSE	Q8K0E8	Fibrinogen beta chain [Cleaved into: Fibrinopeptide B; Fibrinogen beta chain]	Fgb	1,56E-03	0,28	1,25E-03	0,21	9,70E-03	0,52	2,16E-03
SPA3N_MOUSE	Q91WP6	Serine protease inhibitor A3N (Serpina A3N)	Serpina3n Spi2	1,25E-02	-0,09	4,85E-01	0,22	9,27E-02	0,99	7,31E-04
HEMO_MOUSE	Q91X72	Hemopexin	Hpx Hpxn	4,02E-06	0,45	5,23E-06	0,39	2,68E-05	0,69	1,25E-04
TRFE_MOUSE	Q92111	Serotransferrin (Transferrin) (Beta-1 metal-binding globulin) (Siderophilin)	Tf Trf	2,09E-03	0,12	1,73E-01	0,33	1,15E-03	0,66	1,17E-03
PSIP1_MOUSE	Q99JF8	PC4 and SFRS1-interacting protein (Lens epithelium-derived growth factor) (mLEDGF)	Psip1 Ledgf	1,91E-02	-0,10	1,62E-04	-0,03	2,33E-01	-0,05	2,70E-01
PBDC1_MOUSE	Q9D0B6	Protein PBDC1 (Polysaccharide biosynthesis domain-containing protein 1)	Pbdc1	1,14E-02	-0,16	5,12E-05	-0,03	3,65E-01	0,05	4,48E-01
GATM_MOUSE	Q9D964	Glycine amidinotransferase, mitochondrial (EC 2.1.4.1) (L-arginine:glycine amidinotransferase) (Transamidinase)	Gatm	1,73E-02	-0,12	3,35E-02	-0,07	2,16E-01	0,41	1,23E-03
SNP29_MOUSE	Q9ERB0	Synaptosomal-associated protein 29 (SNAP-29) (Golgi SNARE of 32 kDa) (Gs32) (Soluble 29 kDa NSF attachment protein) (Vesicle-membrane fusion protein SNAP-29)	Snap29	1,73E-02	0,29	1,02E-03	0,18	2,24E-02	0,41	1,07E-02