Supplementary Table S6. Top networks in MaSC-enriched population regulated with SPI diet identified through IPA (Total of 907 genes)*

ID	Molecules in Network	Score	Focus Molecules	Top Functions
1	ADAMTS7,AOC3,BCKDHB,BMPER,CCDC80,CD80/CD86,CDO1,COLEC12,CTNNA-CTNNB1-CTNNG-CDH5,EMP2,ENPP3,GBP6,GP1BB,HCN3,IFI35,Ifi47,IFI27L2,IFIT3,IFIT1B,Interferon-Î± Induced,IRG,IRGM,LRRC8C,MMD,PLA2G16,PLIN4,SCARA3,SCARA5,SCAVENGER RECEPTOR CLASS A,SLC14A1,SLC43A2,SPARCL1,SPOCK1,TNF,TRPM4	43	30	Gene Expression, RNA Post-Transcriptional Modification, Organ Development
2	Alpha Actinin,Bglap (includes others),CA2,CAP1,CLCN3,COL3A1,Collagen type III,CSRP2,CTSH,DNASE1,EID3,ENPEP,ESR1,FGFR2,FLRT2,G-Actin,GBP7,GJB2,GJB6,glutathione peroxidase,GSN,INHBB,LOXL4,Mcpt4,NR2F1,PCOLCE,SERPINB9,SLC9A3R1,SOX7,SOX17,SRGN,Tropomyosin,VAT1,WISP1,WWC1	43	30	Cancer, Reproductive System Disease, Tissue Morphology
3	Accn1,BMP,BMP8A,CASQ2,CHAC1,Ck2,Cml5,CYP1B1,CYP2C19,EIF2AK2,GBP2 (includes EG:14469),HADHA,HADHB,HSPE1,IL1A,IL1RN,MAPK13,mediator,NAALAD2,NFKBIA,OASL,OGN,RNA polymerase II,RORC,RTP4,Scd2,SLC2A13,SLC41A2,SPP1 (includes EG:20750),SULT1A1,TAGLN2,UGT1A6,unspecific monooxygenase,ZBP1,ZFC3H1	43	30	Developmental Disorder, Genetic Disorder, Metabolic Disease

4	ADAMTS4,ADAMTS5,Adaptor protein 1,BARX2,C1QTNF2,DCT,ENC1,ERK1/2,FAM59A,FIGF,GIPC1,IDI1,IL-1R,KIDINS220,L1CAM,NfkB1-RelA,NRP1 (includes EG:18186),NTN1,PTPRB,PTPRZ1,Rab11,RAB25,RAB11FIP1,SBSN,Secretase gamma,SEMA3C,SEMA4C,sGC,SHC4,SMAD1/5,SRPX2,SULF2,THBD,TIE1,TRIM2	36	27	Cell-To-Cell Signaling and Interaction, Nervous System Development and Function, Connective Tissue Disorders
5	7S NGF,ADAMTS12,Alpha catenin,CCL8,CCL11,CCL21,CXCL6,DPP4,EGFL6,ERK,FBLN5,Igf,IGFBP6,IGFBP7,Igfbp,Il12 receptor,IL17RB,ITGA8,ITGB6,LOXL1,LTBP1,LUM,MAL,MMP12,MMP19,NCF4,PDK4,PGD,RGS5,SMOOTH MUSCLE ACTIN,Tenascin,TNC,TWIST1,VCAN,ZEB2	36	27	Cancer, Reproductive System Disease, Cellular Movement
6	ACLY,ANXA3,BCAR3,CLDN7,CLDN8,CLDN10,cldn,CLIP4,COL1A1,COL1A2,COL5A2,COL5A3,COL6A1,COL6A2,COL6A3,collagen,CTSK,DDR2 (includes EG:18214),ENTPD5,FAP,KCNQ1,MFAP5,MKX,MRC2,Ndpk,NME6,Pka,Ppp1r9a,pyruvate kinase,Ral,Rap,SCEL,T3-TR-RXR,THRSP,VWF	36	27	Connective Tissue Disorders, Genetic Disorder, Dermatological Diseases and Conditions

7	Angiotensin II receptor type 1,BCAT1,BNC1,C1orf116,CCNF,CD8,CD82,Cg,DPT,DUOX1,EHF,EMB,ENPP2,FGL2,GBP4,GDF10,H2-Q5,H2-T10/H2-T22,HLA-C,HOMER1,HOMER2,IL20,Integrin alpha 3 beta 1,ITM2A,ITPR,MHC,MHC I-Î±,NDRG2,NFATC2,Oasl2,Rnr,RRM2,SPRR2A (includes others),TACSTD2,Vegf	33	26	Cancer, Reproductive System Disease, Endocrine System Development and Function
8	AKAP11,ATIC,CHI3L1,chymotrypsin,CLEC3B,CYP24A1,Cytokeratin,EFEMP1,ELF3,Hat,Hedgehog,HHIP,KRT4,KRT7,KRT15,KRT18,Krt19,MMP3,MRAS,MXD1,NAP1L2,Neurotrophin,Nuclear factor 1,PDE4DIP,Pdi,PFAS,Ras,SERPINB1,STAT1/3/5 dimer,TG,TIMP3,TRP,TRPV6,TSC22D3,VitaminD3-VDR-RXR	30	24	Cell Death, Embryonic Development, Dermatological Diseases and Conditions
9	3 BETA HSD,CD34,CENPA,CLEC11A,CPA3,CYGB,FBP1,Fcer1,FCER1A,Gcn5l,GLYCAM1,Gm-csf,HES1 (includes EG:15205),HIST1H3A (includes others),Hist2h4 (includes others),Histone h4,HPSE,KAT8,KIT,LIF,NFAT (complex),Notch,PADI3,PLA2,PLSCR1,PSTPIP2,Rac,S100A6,Sapk,SELP,SERPINF1,Sprr1a,TMEM176A,Vla-4,ZBTB16	30	24	Cellular Development, Hematological System Development and Function, Hematopoiesis

10	ABCC9,ABCG1,AK1,ANGPTL4,APOC1,CKMT1A/CKMT1B,creatine kinase,CRIP1,FAM65B,FGFBP1,Gi-coupled receptor,GPIIB-IIIA,HDL,HDL-cholesterol,Iti,ITIH5,JUN/JUNB/JUND,LIPG,LMNB1,Mapk,NCOR-LXR-Oxysterol-RXR-9 cis RA,NPAS2,Nr1h,NRG,PAPPA,PDZK1IP1,PER1,PER2,SAA2,SLIT3,THBS2,TNFAIP6,triacylglycerol lipase,VTN,ZWINT	28	23	Lipid Metabolism, Small Molecule Biochemistry, Vitamin and Mineral Metabolism
11	ASPM,ASPN,C5orf13,CCL21,Cml1/Nat8b,CPXM1,FAM49B,GCNT1,GJC1,GLI1,Gsta4,HAS1,HAS3,HTRA1,IGFBP6,IL17RB,INMT,ITGB6,LOXL1,MAPK6,mir-31,NEU3,NFE2L2,NIPAL2,OSTF1,PIGR,PMM1,PSPH,RAMP2,RNF152,SMOC2,SVEP1,TGFB1 (includes EG:21803),VTCN1,ZNF600/ZNF888	26	22	Cellular Movement, Cell Cycle, Cell-To-Cell Signaling and Interaction
12	ACSL1,Akt,CARD11,CPT1,CPT1A,CRABP1,CRABP2,CYP19,DGAT2,EBF1,Enah,FOXC1,Glycogen synthase,IgG2b,Igtp,Integrin alpha 4 beta 1,JINK1/2,KBTBD7,MTM1,PBXIP1,PIK3AP1,Pki,POSTN,PRKAA,Rar,RBP7,Rbp,Rxr,SCD,SEMA6D,STAT5a/b,STRA6,Tgtp1,TMPRSS4,VLDL	25	21	Lipid Metabolism, Small Molecule Biochemistry, Molecular Transport

13	ANG,ANXA2,CXCL9,DDX60,GFRA1,HLA-E,Ifi203,IFIH1,IFIT2,Ifn,IFN alpha/beta,IFN Beta,IFN TYPE 1,Ifnar,IRF2,IRF9,IRF3 dimer,ISG15,ISGF3,MHC Class I (complex),OAS1,Oas,P38 MAPK,PARP9,PI3K (family),PSMB8,RNF125,RSAD2,SCNN1A,SEPT4,Stat1-Stat2,TAP1,Tap,trypsin,USP18	25	21	Genetic Disorder, Inflammatory Disease, Neurological Disease
14	ADD3,ADH1C,ANGPT2,BCAM,calpain,CCL5,CCL19,CHST12,Collagen Alpha1,Collagen type I,Collagen type IV,Collagen(s),CXCL13,Ecm,Eotaxin,FN1,Focal adhesion kinase,Integrin,LAMA2,Laminin 1,Laminin,LGALS1,LGALS3,LGALS3BP,LOXL2,LYPD3,NID1,OLR1,Pias,Pkg,PSAT1,REN,SUSD2,Tgf beta,THY1	25	21	Cell-To-Cell Signaling and Interaction, Cellular Movement, Hematological System Development and Function
15	20s proteasome,BCL3,BST2,CD274,CXCL10,CXCL11,CYB561,HERC6,HLA Class I,Hla-abc,HLA-B,HSP,Ifn gamma,Iigp1/Iigp1b,IL12 (complex),IL12 (family),Interferon alpha,LAD1,MHC CLASS I (family),MHC Class II (complex),Ms4a4b (includes others),NFE2L3,PARP14,PARP,PCDH17,Pde,PDE1C,PDE7B,SLFN13,SMAGP,STAT1,Tlr,Tnf,TRIL,XAF1	25	21	Infectious Disease, Respiratory Disease, Dermatological Diseases and Conditions

16	BEX1,Cadherin,CDH5,CDH11, Clca1/Clca2,Ctbp,cyclooxygenase,DSC2,DSG1,ENaC,estrogen receptor,Fascin,Fibrin,FSCN1,Hdac,HOPX,I kappa b kinase,Integrin alpha V beta 3,JUP,LDB2,LDL-cholesterol,Lfa-1,LMO2,Lrrfip1,MAL2,Ocln,PCDH1,Pkc(s),PKP2 (includes EG:287925),PRSS8,SPINK5,SPINT1,STARD4,TMOD3,ZEB1	25	22	Cardiovascular Disease, Congenital Heart Anomaly, Developmental Disorder
17	ADCY7,ADCY9,ADCY,ADRB, ASPA,ATP1B1,ATPase,BASP1, Calmodulin,CaMKII,Casein,CK1,Csn1s1,Csn1s2a,EPHA3,GAD, GAL,GTPASE,IDE,KCNN4,mGluR,Myosin,PCP4,phosphoinositide phospholipase C,PLCB1,PNPLA2,Proinsulin,RALBP1,RGS4,RGS12,SLC5A1, TIAM2,TNNT2,TSH,Wap	24	21	Lipid Metabolism, Small Molecule Biochemistry, DNA Replication, Recombination, and Repair
18	Adaptor protein 1,ALDH1A3,AP1S3,ARAP2,Art2a-ps/Art2b,C11orf24,CD44 (includes EG:100330801),chemokine,CLEC4E,DTX3L,ethanol,FAM211A, FGL2,GBP4,Gbp4,GBP6,GLTP, GVINP1,HYAL1,Ifi47,Ifi203,IFI27L2,IFNB1 (includes EG:15977),IFNG (includes EG:15978),Igtp,Irgm2,Ly6,miR-302d-3p/miR-302a-3p/miR-291a-3p (includes others),SSRP1,Tgtp1,TMEM14A,TMTC1,TP63,TPM1 (includes EG:22003),TREM3	24	21	Cell Death, Infectious Disease, Neurological Disease

19	2' 5' oas,AFAP1L2,Ahr-aryl hydrocarbon-Arnt,aldehyde dehydrogenase (NAD),ALDH,ALDH1A1,ALDH1A3,ALDH3A1,ALOX15,C/ebp,Cebp,CLU,Cr3,Ferritin,glutathione transferase,GST,GSTA3,Gsta4,GSTT1,GSTT2/GSTT2B,hemoglobin,IGJ,IL6,IL23,LGALS4,MLF1,peroxidase,PXR ligand-PXR-Retinoic acid-RXRÎ±,RARRES2,RNASE1,SAA1,SAA,SCARB1,SLC40A1,STEAP3	23	20	Drug Metabolism, Glutathione Depletion In Liver, Embryonic Development
20	AVPI1,BCL2,beta-estradiol,BNIP2,BNIPL,CCL21,CCL25,CLCN3,COCH,CTSH,DHX32,G0S2,GABRP,GLRB,GRIK4,IGFBP6,IGSF1,IL13,IL20,INHA,ITGBL1,KCNMA1,KCNMB1,KCNMB2,KCNMB4,KCNU1,KRT79,MATN2,PID1,PXDN,SPOCK2,Sprr1a,SYNGR2,TIMP4,TSPO	23	20	Molecular Transport, Cardiac Arrythmia, Cardiovascular Disease
21	AQP9,C16orf74,C1S,Ca2+,CCL21,CLIC3,COX6A2,D-glucose,EGFLAM,EIF2AK3,ENPEP,ERO1LB,FBXO8,GLP1R,GOT1,HAO1,HNF1A,LRRC73,MAPK15,Na+,NCEH1,norepinephrine,NR5A1,PAMR1,PIGR,PODXL,PPEF2,PPP3CA,Rcan1,SLC28A3,SLC5A1,TBC1D1,TMEM140,TMPRSS11D,TOP1MT	23	20	Cell Death, Renal and Urological System Development and Function, Lipid Metabolism

22	ADM,ALT,ARG1,B2M,BCL6,CERK,CSF3,DHCR7,Fc gamma receptor,Fcgr2,Fcgr3,FCGR2B,GOT,HLA-DR,Ige,IgG1,IgG,IgG2a,IGHM,Igm,IL24,IL18 (includes EG:16173),immune,KLK11,NOTCH2,p85 (pik3r),PEA15,PIGR,PLCG2,Pld,PRDM1,RTN1 (includes EG:104001),TH1 Cytokine,TNFAIP3,UGCG	23	20	Cell Death, Cellular Development, Hematological System Development and Function
23	26s Proteasome,CCND1,Cdk,CDKN2B,CTNNAL1,Cyclin A,Cyclin D,Cyclin E,E2f,ELOVL7,ENDOD1,EZH2,FEN1,FHOD3,FOSB,HIST1H2BJ/HIST1H2BK,KRT80,LRP,LYPD6B,MEF2,MFSD6,MMP13,Mmp,ORC1 (includes EG:18392),Rb,RUNX3,S100A4,SERPINA1,SERPINE1,Smad2/3,Smad2/3-Smad4,TCF/LEF,TMPRSS11E,TP53INP1,ZFHX3	22	22	Cancer, Reproductive System Disease, Antigen Presentation
24	AMACR,BASP1,C1QC,CBLN1,CMPK1,DIRAS2,EMP3,ERP29,GTF3C2,GTF3C3,HRAS,HTT,IFITM3,inosine,KLF11,MCC,MFAP4,MS4A6A,NUDT5,PKP1,Serpina3g (includes others),Serpina3k (includes others),SERPINF1,SERPING1,SH3YL1,SHISA4,SIRT6,SOD2,SPON1,SRRT,ST8SIA6,TRAF3,TYRO3,VIM,ZNF655	22	20	Neurological Disease, Organismal Injury and Abnormalities, Free Radical Scavenging

25	ABI3BP,ANXA3,ANXA8/ANXA8L1,BBOX1,BPGM,CEL,CES2,CTSH,DNAH17,DUOXA1,ESD,Fam13a,FAM3C,GRB2,Gstp1 (includes others),IFI35,IL17C,KIF26A,KRT34,Krtap22-2,LY6D,MGST2,OSM,OTUD5,PTPRE,RNASE4,RPA,SERPING1,SH2D4A,SMARCAL1,TEAD2,TNFAIP2,TP53 (includes EG:22059),TSTA3,ZBTB7C	21	20	Connective Tissue Disorders, Developmental Disorder, Genetic Disorder

* SPI-regulated genes (SPI vs. CAS); ≥ 1.3 fold-change