

Table S2. GOTERM CC analysis. Analysis of total DEGs and the subgroups of up- and down-regulated DEGs. Numbers in brackets indicate count of DEGs.

ID	Description	Count in Gene set	Percent -age%	P-value	Benjamini	List of Genes														
						Up-regulated						Down-regulated								
Analysis of Total DGEs																				
GO:0043292	Contractile fiber	34	8.1	1.60E-16	6.50E-14	TPM3	SCO2 (2)							ARHGEF25 VCL MYOM1 NEXN SYNM	CALD1 ATP2B4 ACTC1 FLNA DST CASQ2	FERMT2 DES CRYAB ABCC9 SYNE1	PDLIM3 SORBS2 PGM5 TMOD (32)	TPM2 DMD SYNPO2 SVIL	TPM1 ILK FLNC MYH11	MYL9 LMOD1 PALLD SVIL
GO:0030016	Myofibril	33	7.9	2.30E-16	6.50E-14	TPM3	SCO2 (2)							ARHGEF25 VCL MYOM1 NEXN SYNMDST	CALD1 DES ACTC1 FLNA CASQ2	FERMT2 ATP2B4 CRYAB ABCC9 SYNE1	PDLIM3 SORBS2 ACTN1 SYNE1	TPM2 DMD SYNPO2 PGM5	TPM1 ILK FLNC SVIL	MYL9 LMOD1 PALLD SVIL
GO:0044449	Contractile fiber part	32	7.7	7.70E-16	1.50E-13	TPM3 (1)								ARHGEF25 DES MYOM1 NEXN MYH11	FERMT2 ATP2B4 ACTC1 FLNA SYNM	PDLIM3 SORBS2 CRYAB ABCC9 CASQ2	TPM2 DMD ACTN1 SYNE1 CASQ2	TPM1 ILK SYNPO2 PGM5 TMOD1 (31)	MYL9 VCL LMOD1 PALLD SVIL	
GO:0030017	Sarcomere	28	6.7	2.20E-13	3.10E-11	TPM3 (1)								ARHGEF25 ATP2B4 ACTC1 FLNA	FERMT2 SORBS2 CRYAB SYNE1	PDLIM3 ILK ACTN1 ABCC9	TPM2 DMD SYNPO2 PGM5	TPM1 LMOD1 FLNC DST	MYL9 DES PALLD NEXN	
GO:0005819	Spindle	29	6.9	3.10E-09	3.60E-07	PRC1 CDC48 KIF15 CENPE CKAP2L	NEK2 ASPM TPX2 RACGAP1 KIF20A (26)	KNTC1 CKAP2 NUSAP1 TACC3	TTK CDK1 CENPF ECT2	AURKA BIRC5 CCNB1	AURKB DLGAP5 CDC20 MAD2L1	PKD2 KLHL42 MAP7D3 (3)								
GO:0030496	Midbody	19	4.5	6.20E-09	6.10E-07	CDK1 BIRC5 ASPM	PRC1 AURKB KIF20A (14)	NEK2 CEP55	CENPF RACGAP1	CENPE ECT2	AURKA CDC48	TACC1 KIF13A CLIC4 SVIL PTCH1 (5)								
GO:0015630	Microtubule cytoskeleton	61	14.6	9.00E-09	7.50E-07	STIL PRC1 KNTC1 RANBP1 NUSAP1 RUVBL1 CKAP2 RACGAP1	KNTC1 TOP2A MCM2 TACC2 NEK2 CHEK1 SHMT2 DLGAP5 CCNB1	TTK TUBA1C ECT2 CHEK1 RGS19 PLK4	TPK2 ASPM CDK1 MAD2L1 CEP55 CENPF CCNB2 PCNA	KIF2C KIF11 CKAP2L TUBB NCAPG CENPE BIRC5 CDC20 KIF20A (44)	CDC48 TPX2 STMN1 NCAPG CDC20	KIF13A CRYAB KLHL42	MAPT TACC1 MAP1A	SLMAP CLIC4 MAP1B	TUBB6 DST SVIL (17)	TUBA1A MAP7D3	ROCK2 SORBS1 PKD2			
GO:0099513	Polymeric cytoskeletal fiber	45	10.8	2.40E-08	1.70E-06	PRC1 TPM3 CDK1 CENPE	LMNB1 KIF2C KIF11 BIRC5	NEK2 TUBB KIF15 RACGAP1	KNTC1 TUBA1C TPX2 STMN1	AURKA ASPM RGS19 KIF26B	AURKB CKAP2 NUSAP1 KIF20A (24)	FERMT2 TUBB6 ACTN1	TPM2 LMOD1 PALLD	TPM1 TUBA1A FLNA	TPM1 RSCD1 SVIL	KIF13A ACTC1 SVIL	DES MAP1A SYNM DST	MAPT PKD2 MAP1B TMOD1 (21)		
GO:0099512	Supramolecular fiber	45	10.8	2.40E-08	1.70E-06	PRC1 TPM3 CDK1 CENPE	LMNB1 KIF2C KIF11 BIRC5	NEK2 TUBB KIF15 RACGAP1	KNTC1 TUBA1C TPX2 STMN1	AURKA ASPM RGS19 KIF26B	AURKB CKAP2 NUSAP1 KIF20A (24)	FERMT2 TUBB6 MAP1B	TPM2 LMOD1 ACTN1	TPM1 TUBA1A PALLD	KIF13A RSCD1 FLNA SVIL	DES ACTC1 SYNM DST	MAPT PKD2 MAP1A TMOD1 (21)			
GO:0031674	I band	18	4.3	3.10E-08	1.80E-06							ACTC1 PALLD ATP2B4	CRYAB NEXN SORBS2	FERMT2 FLNC DMD	PDLIM3 DST	ACTN1 MYL9 CASQ2 (18)	SYNPO2 PGM5 DES			
Analysis of Up-regulated DGEs																				
GO:0005654	Nucleoplasm	54	40.9	1.30E-08	3.40E-07	E2F2, PRC1, EZH2, AURKA, CBX2, AURKB, MCM10, CDC48, HIST1H2BK, FANCI, TOP2A, CDC45, CCNA2, CDK1, TPX2, MCM2, UBE2C, MCM5, NCAPD2, RRM2, SNRBP, RUVBL1, KPNA2, UBE2T, CKS1B, HMGB2, BLM, LMNB1, FOXM1, KIAA0101, CHEK1, TYMS, HJURP, BUB1, POLQ, SCO2, FEN1, ETV4, SIM2, TFDP1, RAD51AP1, HIST1H2BD, CENPF, BIRC5, CDC20, RACGAP1, CDC25C, SMC4, CCNB1, CCNB2, ILF2, PARPBP, PCNA, KIF20A (54)														
GO:0005829	Cytosol	50	37.9	3.30E-05	5.20E-04	STIL, PRC1, AP2S1, DTYMK, KNTC1, AURKA, PTTG1, AURKB, KIF2C, CDC48, CDC45, DHCR24, CDK1, KIF11, KIF15, TPX2, UBE2C, ECT2, NCAPD2, MAD2L1, ZWINT, RRM2, SNRBP, STMN1, KPNA2, ARL6IP1, NEK2, SNX8, DIAPH3, CHEK1, TKI, HMMR, TPM3, TYMS, NCAPG, PAFAH1B3, FASN, BUB1, CENPF, BIRC5, CDC20, CENPE, RACGAP1, CDC25C, SMC4, CCNB1, PLK4, CCNB2, BAX, CIT (50)														
GO:0015630	Microtubule cytoskeleton	44	33.3	1.90E-18	7.40E-16	STIL, PRC1, NEK2, KNTC1, TTK, CHEK1, AURKA, CEP55, AURKB, KIF2C, CDC48, TUBB, NCAPG, RANBP1, TOP2A, TUBA1C, ASPM, CKAP2, CDK1, SHMT2, KIF11, DLGAP5, KIF15, TPX2, RGS19, CENPF, NUSAP1, CENPE, BIRC5, MCM2, MCM5, SMC4, RACGAP1, TACC3, ECT2, CCNB1, PLK4, CCNB2, MAD2L1, CKAP2L, PCNA, STMN1, RUVBL1, KIF26B, KIF20A (44)														
GO:0005694	Chromosome	41	31.1	2.00E-18	3.90E-16	HMGB2, BLM, NEK2, EZH2, KNTC1, TTK, CBX2, CHEK1, AURKA, AURKB, MCM10, KIF2C, CDC48, HIST1H2BK, HJURP, NCAPG, BUB1, HIST3H2A, POLQ, TOP2A, CDC45, FEN1, CDK1, RAD51AP1, HIST1H2BD, MKI67, CENPF, NUSAP1, CENPE, BIRC5, MCM2, MCM5, SMC4, NCAPD2, CCNB1, PLK4, MAD2L1, ZWINT, PARPBP, PCNA, RUVBL1 (41)														
GO:0044427	Chromosomal part	37	28	8.70E-17	8.70E-15	HMGB2, BLM, NEK2, EZH2, KNTC1, TTK, CBX2, CHEK1, AURKA, AURKB, MCM10, KIF2C, CDC48, HIST1H2BK, HJURP, NCAPG, BUB1, HIST3H2A, CDC45, FEN1, CDK1, RAD51AP1, 37HIST1H2BD, MKI67, CENPF, CENPE, BIRC5, MCM2, MCM5, SMC4, NCAPD2, CCNB1, MAD2L1, ZWINT, PARPBP, PCNA, RUVBL1 (37)														
GO:0005819	Spindle	26	19.7	4.40E-18	5.70E-16	PRC1, NEK2, KNTC1, TTK, AURKA, AURKB, CDC48, ASPM, CKAP2, CDK1, KIF11, DLGAP5, KIF15, TPX2, NUSAP1, CENPF, BIRC5, CDC20, CENPE, RACGAP1, TACC3, ECT2, CCNB1, MAD2L1, CKAP2L, KIF20A (26)														

GO:0098687	Chromosomal region	25	18.9	1.20E-15	7.90E-14	CDK1, MKI67, BLM, NEK2, KNTC1, CENPF, TTK, CENPE, BIRC5, CHEK1, AURKA, MCM2, AURKB, MCM5, NCAPD2, CCNB1, KIF2C, CDCA8, MAD2L1, HJURP, ZWINT, PCNA, BUB1, CDCA5, FEN1
GO:0000228	Nuclear chromosome	24	18.2	2.20E-10	7.20E-09	CDK1, HMGB2, RAD51AP1, HIST1H2BD, BLM, NEK2, EZH2, BIRC5, CHEK1, AURKA, MCM2, AURKB, MCM10, MCM5, NCAPD2, CCNB1, HIST1H2BK, BUB1, PCNA, HIST3H2A, RUVBL1, CDCA5, TOP2A, FEN1
GO:0099512	Supramolecular fiber	24	18.2	2.10E-08	4.80E-07	CKAP2, CDK1, KIF11, LMNB1, PRC1, NEK2, KIF15, TPX2, KNTC1, NUSAP1, RGS19, BIRC5, AURKA, CENPE, AURKB, RACGAP1, TPM3, KIF2C, TUBB, STMN1, ASPM, TUBA1C, KIF26B, KIF20A
GO:0099513	Polymeric cytoskeletal fiber	24	18.2	2.10E-08	4.80E-07	CKAP2, CDK1, KIF11, LMNB1, PRC1, NEK2, KIF15, TPX2, KNTC1, NUSAP1, RGS19, BIRC5, AURKA, CENPE, AURKB, RACGAP1, TPM3, KIF2C, TUBB, STMN1, ASPM, TUBA1C, KIF26B, KIF20A
GO:0005654	Nucleoplasm	54	40.9	1.30E-08	3.40E-07	E2F2, PRC1, EZH2, AURKA, CBX2, AURKB, MCM10, CDCA8, HIST1H2BK, FANCI, TOP2A, CDCA5, CCNA2, CDK1, TPX2, MCM2, UBE2C, MCM5, NCAPD2, RRM2, SNRPB, RUVBL1, KPNA2, UBE2T, CKS1B, HMGB2, BLM, LMNB1, FOXM1, KIAA0101, CHEK1, TYMS, HJURP, BUB1, POLQ, SCO2, FEN1, ETV4, SIM2, TFDP1, RAD51AP1, HIST1H2BD, CENPF, BIRC5, CDC20, RACGAP1, CDC25C, SMC4, CCNB1, CCNB2, ILF2, PARPBP, PCNA, KIF20A
GO:0005829	Cytosol	50	37.9	3.30E-05	5.20E-04	STIL, PRC1, AP2S1, DTYMK, KNTC1, AURKA, PTTG1, AURKB, KIF2C, CDCA8, CDCA5, DHCR24, CDK1, KIF11, KIF15, TPX2, UBE2C, ECT2, NCAPD2, MAD2L1, ZWINT, RRM2, SNRPB, STMN1, KPNA2, ARL6IP1, NEK2, SNX8, DIAPH3, CHEK1, TK1, HMMR, TPM3, TYMS, NCAPG, PAFAH1B3, FASN, BUB1, CENPF, BIRC5, CDC20, CENPE, RACGAP1, CDC25C, SMC4, CCNB1, PLK4, CCNB2, BAX, CIT
Analysis of Down-regulated DGEs						
GO:0005576	Extracellular region	104	36.4	2.60E-04	4.10E-03	SNCA, PTGS1, FGF10, VCL, ACTG2, PTGIS, RAB23, CFD, PI16, SPON1, BST1, SPARCL1, CRYAB, CRTAP, ACTN1, MGP, SERPING1, PRELP, NCAM1, CD34, PLA2G2A, MFAP4, DST, SH3GL2, MAMDC2, ADAMTSL3, PAMR1, P3H2, OSBP1A, FGL2, SBSPO, VSTM4, BHMT2, NTF3, MAOB, AK4, CSRP1, IGIP, EPHA3, LAMA2, C2ORF40, HSPA12A, MYH11, TGFB3, ANTXR2, MYLK, KCTD12, RHOF, FGF9, LEPR, DDR2, DSTN, CKB, DES, GPX3, ANG, GPX3, SERPINA3, RHOB, TUBB6, ITH5, TUBA1A, FGF2, KCNMA1, STX2, CPXM2, PKDCC, WLS, NDNF, FLNA, SLIT3, CLIC4, CNTN1, JAM3, C7, FMOD, C3, CIS, ITM2A, ANXA6, ALDH1A1, IGSF10, GLIPR1, PKD2, ADAMTSL10, DPT, ACTC1, IL6, SVEP1, CREB5, ATP1A2, PTGFR, SOD3, PLAC9, LSP1, PLSCR4, FBLN5, AOX1, HBEGF, GFRA1, GAMT, IGFBP2, PYGB, CDH11
GO:0044421	Extracellular region part	90	31.5	3.40E-04	5.20E-03	RHOF, FGF9, SNCA, PTGS1, FGF10, DDR2, DSTN, CKB, VCL, ACTG2, DES, GPC3, PTGIS, ANG, GPX3, SERPINA3, RAB23, RHOB, TUBB6, TUBA1A, CFD, PI16, FGF2, SPON1, KCNMA1, STX2, CRYAB, SPARCL1, BST1, CRTAP, ACTN1, MGP, CPXM2, SERPING1, WLS, FLNA, NDNF, PRELP, SLIT3, NCAM1, CLIC4, CD34, PLA2G2A, CNTN1, MFAP4, DST, SH3GL2, C7, C3, CAMK2G, CIS, ITM2A, C7, FMOD, MAMDC2, C3, ADAMTSL3, C1S, ITM2A, P3H2, ALDH1A1, ANXA6, OSBP1A, PKD2, ADAMTSL10, FGL2, DPT, SBSPO, BHMT2, ACTC1, IL6, MAOB, CREB5, CSRP1, ATP1A2, AK4, SOD3, C2ORF40, LSP1, LAMA2, HSPA12A, PLSCR4, FBLN5, AOX1, MYH11, HBEGF, GFRA1, TGFB3, GAMT, IGFBP2, MYLK, CDH11, PYGB, KCTD12
GO:0031988	Membrane-bound vesicle	84	29.4	5.80E-04	7.50E-03	RHOF, FGF9, SNCA, PTGS1, DDR2, DSTN, VCL, CKB, ACTG2, DES, GPC3, CD93, ANG, GPX3, SERPINA3, RAB23, RHOB, TUBB6, TUBA1A, CFD, PI16, KCNMA1, STX2, CRYAB, SPARCL1, BST1, ACTN1, MGP, SERPING1, PCDH7, WLS, NRXN1, SSPN, FLNA, PRELP, NCAM1, CLIC4, PLA2G2A, CNTN1, MFAP4, DST, SH3GL2, C7, C3, CAMK2G, CIS, ITM2A, ALDH1A1, ANXA6, OSBP1A, PKD2, GALNT15, FGL2, DPT, BHMT2, ACTC1, NTF3, SYTI1, MAOB, CREB5, CSRP1, AK4, SOD3, ITPR1, C2ORF40, LSP1, LAMA2, FBNP1, HSPA12A, PLSCR4, FBLN5, AOX1, MYH11, HBEGF, ABCC4, GFRA1, TGFB3, PTCH1, GAMT, IGFBP2, MYLK, CDH11, PYGB, KCTD12
GO:1903561	Extracellular vesicle	70	24.5	3.90E-04	5.70E-03	RHOF, FGF9, PTGS1, DDR2, DSTN, VCL, CKB, ACTG2, DES, GPC3, ANG, GPX3, SERPINA3, RAB23, TUBB6, RHOB, TUBA1A, CFD, PI16, KCNMA1, STX2, SPARCL1, BST1, CRYAB, ACTN1, MGP, SERPING1, WLS, FLNA, PRELP, NCAM1, CLIC4, PLA2G2A, CNTN1, MFAP4, DST, SH3GL2, C7, C3, CIS, ITM2A, ALDH1A1, ANXA6, OSBP1A, PKD2, FGL2, DPT, ACTC1, BHMT2, MAOB, CREB5, CSRP1, AK4, ATP1A2, SOD3, LSP1, LAMA2, HSPA12A, PLSCR4, FBLN5, AOX1, MYH11, TGFB3, GFRA1, GAMT, IGFBP2, MYLK, PYGB, KCTD12, CDH11
GO:0043230	Extracellular organelle	70	24.5	3.90E-04	5.60E-03	RHOF, FGF9, PTGS1, DDR2, DSTN, VCL, CKB, ACTG2, DES, GPC3, ANG, GPX3, SERPINA3, RAB23, TUBB6, RHOB, TUBA1A, CFD, PI16, KCNMA1, STX2, SPARCL1, BST1, CRYAB, ACTN1, MGP, SERPING1, WLS, FLNA, PRELP, NCAM1, CLIC4, PLA2G2A, CNTN1, MFAP4, DST, SH3GL2, C7, C3, CIS, ITM2A, ALDH1A1, ANXA6, OSBP1A, PKD2, FGL2, DPT, ACTC1, BHMT2, MAOB, CREB5, CSRP1, AK4, ATP1A2, SOD3, LSP1, LAMA2, HSPA12A, PLSCR4, FBLN5, AOX1, MYH11, TGFB3, GFRA1, GAMT, IGFBP2, MYLK, PYGB, KCTD12, CDH11
GO:0070062	Extracellular exosome	69	24.1	5.70E-04	7.90E-03	RHOF, FGF9, PTGS1, DDR2, DSTN, VCL, CKB, ACTG2, DES, GPC3, ANG, GPX3, SERPINA3, RAB23, TUBB6, RHOB, TUBA1A, CFD, PI16, KCNMA1, STX2, SPARCL1, BST1, CRYAB, MGP, ACTN1, SERPING1, WLS, FLNA, PRELP, NCAM1, CLIC4, PLA2G2A, CNTN1, MFAP4, DST, SH3GL2, C7, C3, CIS, ITM2A, ALDH1A1, ANXA6, OSBP1A, PKD2, FGL2, DPT, ACTC1, BHMT2, MAOB, CREB5, CSRP1, AK4, SOD3, LSP1, LAMA2, HSPA12A, PLSCR4, FBLN5, AOX1, MYH11, TGFB3, GFRA1, GAMT, IGFBP2, MYLK, PYGB, KCTD12, CDH11
GO:0030054	Cell junction	48	16.8	1.50E-06	3.70E-05	FHL1, CALD1, SNCA, FERMT2, DDR2, VCL, ANXA6, DES, PRRT2, SORBS1, SORBS2, DMD, ILK, PKD2, RHOB, CNN1, UNC5C, LRRFIP1, DTNA, DIXDC1, KCTC1, LPP, SYTI1, MAP1B, ACTN1, SYNPO2, CSRP1, NRXN1, ATP1A2, NEXN, FLNC, PALLD, SSPN, FLNA, TMEM47, TNSI, PGM5, CHRM3, STXBP6, CLIC4, SVIL, ITGA8, AKAP6, SYNM, DST, JAM3, SGCA, KCTD12
GO:0005615	Extracellular space	36	12.6	1.50E-02	1.10E-01	FMOD, C3, FGF9, SNCA, FGF10, CIS, CKB, ACTG2, PTGIS, GPC3, ANG, GPX3, SERPINA3, FGL2, CFD, FGF2, DPT, SPON1, IL6, ACTC1, STX2, SPARCL1, CRTAP, CPXM2, ACTN1, SERPING1, SOD3, SLIT3, PRELP, C2ORF40, FBLN5, PLA2G2A, HBEGF, TGFB3, IGFBP2, JAM3 243
GO:0097458	Neuron part	35	12.2	8.10E-03	6.80E-02	PTGS2, CAMK2G, SNCA, PTGS1, FOS, ATP2B4, FAM107A, ANG, DMD, MAPT, ILK, UNC5C, BOC, DTNA, KCND3, STX2, CRYAB, SYTI1, RBFOX3, MAP1B, WLS, ATP1A2, NRXN1, PALLD, FLNA, ITPR1, LAMA2, EPHA7, CHRM3, ITGA8, SYNM, PTCH1, DST, KCTD12, NFIB
GO:0043292	Contractile fiber	32	11.2	5.90E-20	1.20E-17	ARHGEF25, CALD1, FERMT2, PDLIM3, TPM2, TPM1, MYL9, VCL, ATP2B4, DES, SORBS2, DMD, ILK, LMOD1, MYOM1, ACTC1, CRYAB, ACTN1, SYNPO2, FLNC, PALLD, NEXN, FLNA, ABCC9, SYNE1, PGM5, SVIL, MYH11, SYNM, DST, CASQ2, TMOD1