

**Supplementary Table 3.** Biological functions of the genes with altered expression in MCF-7/ADR cells as determined by Ingenuity Pathway analysis\*

Category	Function	Function annotation†	P‡	Gene symbol	No. of molecules
Cancer	Neoplasia	Neoplasia	$3.95 \times 10^{-26}$	<p><i>ABAT, ABCB1, ADA, AGR2, AKAP12, AKR1C2, AKT3, ANK3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, BRIP1, BST2, C6ORF211, CA2, CALD1, CCNE2, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, CLGN, COL1A1, COL4A1, COL4A2, COL6A1, COL6A2, CREBBP, CRIP1, CTGF, CXCL12, CYP1B1, CYR61, DNAJB4, DNAJC15, ECM1, EGFR, EML1 (includes EG:2009), EMP1, EPCAM, ESR1, EXT1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GLUL, GPX1, GPX3, GREB1, GSTP1, HEY2, HIST1H2BD, HIST1H4H (includes EG:8365), HIST2H2AA3, HIST2H2BE, HMGA1, HMGA2, HNMT, ICAM1, ID2, IGF2BP3, IGFBP3, IGFBP5, IL7R, INSIG1, IRS1, ISOC1, KLF4, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MLPH, MMP1 (includes EG:4312), MSLN, MSMB, MSX2, MT1E, MUC1, MYB (includes EG:4602), MYL9 (includes EG:10398), NNMT, NOV, NPY1R, NUA1, OLFM1, PDGFC, PDZK1, PIK3R1, PIK3R3, PPP1R3D, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, S100A14, S100P, SCUBE2, SDC2, SEMA3C, SERPINA3, SERPINE1, SERPINE2, SERTAD2, SGK3, SLC12A8, SLC16A3, SLC19A2, SLC24A3, SLC39A6, SOCS2, SPARC, SRPX, STXBP6, TACSTD2, TFAP2C, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TPD52L1, TUBB2A, VAV3, VIM, WNT5A, WWOX, ZYX</i></p>	144
Cancer	Tumorigenesis	Tumorigenesis	$8.79 \times 10^{-26}$	<p><i>ABAT, ABCB1, ADA, AGR2, AKAP12, AKR1C2, AKT3, ANK3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, BRIP1, BST2, C6ORF211, CA2, CALD1, CCNE2, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, CLGN, COL1A1, COL4A1, COL4A2, COL6A1, COL6A2, CREBBP, CRIP1, CTGF, CXADR, CXCL12, CYP1B1, CYR61, DNAJB4, DNAJC15, ECM1, EGFR, EML1 (includes EG:2009), EMP1, EPCAM, ESR1, EXT1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GLUL, GPX1, GPX3, GREB1, GSTP1, HEY2, HIST1H2BD, HIST1H4H (includes EG:8365), HIST2H2AA3, HIST2H2BE, HMGA1, HMGA2, HNMT, ICAM1, ID2, IGF2BP3, IGFBP3, IGFBP5, IL7R, INSIG1, IRS1, ISOC1, KLF4, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MLPH, MMP1 (includes EG:4312), MSLN, MSMB, MSX2, MT1E, MUC1, MYB (includes EG:4602), MYL9 (includes EG:10398), NNMT, NOV, NPY1R, NUA1, OLFM1, PDGFC, PDZK1, PIK3R1, PIK3R3, PPP1R3D, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, S100A14, S100P, SCUBE2, SDC2, SEMA3C, SERPINA3, SERPINE1, SERPINE2,</i></p>	145

				SERTAD2, SGK3, SLC12A8, SLC16A3, SLC19A2, SLC24A3, SLC39A6, SOCS2, SPARC, SRPX, STXBP6, TACSTD2, TFAP2C, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TPD52L1, TUBB2A, VAV3, VIM, WNT5A, WWOX, ZYX	
Cancer	Tumorigenesis	Tumorigenesis of organ	$3.07 \times 10^{-3}$	AREG, CDKN2A	2
Cancer	Cancer	Cancer	$2.23 \times 10^{-25}$	ABAT, ABCB1, ADA, AGR2, AKAP12, AKR1C2, AKT3, ANK3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, BRIP1, BST2, C6ORF211, CA2, CALD1, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, CLGN, COL1A1, COL4A1, COL4A2, COL6A1, COL6A2, CREBBP, CRIP1, CTGF, CXCL12, CYP1B1, CYR61, DNAJB4, DNAJC15, ECM1, EGFR, EMP1, EPCAM, ESR1, EXT1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GLUL, GPX1, GPX3, GREB1, GSTP1, HEY2, HIST1H2BD, HIST1H4H (includes EG:8365), HIST2H2AA3, HIST2H2BE, HMGA1, HMGA2, HNMT, ICAM1, ID2, IGF2BP3, IGFBP3, IGFBP5, IL7R, INSIG1, IRS1, KLF4, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MLPH, MMP1 (includes EG:4312), MSLN, MSMB, MSX2, MT1E, MUC1, MYB (includes EG:4602), MYL9 (includes EG:10398), NNMT, NPY1R, NUAKE1, OLFM1, PDGFC, PDZK1, PIK3R1, PIK3R3, PPP1R3D, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, S100A14, S100P, SCUBE2, SDC2, SEMA3C, SERPINA3, SERPINE1, SERPINE2, SERTAD2, SGK3, SLC12A8, SLC16A3, SLC19A2, SLC24A3, SLC39A6, SOCS2, SPARC, SRPX, STXBP6, TACSTD2, TFAP2C, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TPD52L1, TUBB2A, VAV3, VIM, WNT5A, WWOX, ZYX	140

Cancer	Primary tumor	Primary tumor	$7.41 \times 10^{-21}$	ABAT, ABCB1, ADA, AGR2, AKAP12, AKT3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, C6ORF211, CA2, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, COL1A1, COL4A1, COL4A2, CREBBP, CTGF, CYP1B1, CYR61, ECM1, EGFR, EPCAM, ESR1, EXT1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GPX1, GPX3, GSTP1, HIST2H2AA3, HMGA1, HMGA2, HNMT, ID2, IGFBP3, IGFBP5, INSIG1, ISOC1, KLF4, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MSLN, MSMB, MSX2, MT1E, MUC1, MYL9 (includes EG:10398), NNMT, NOV, NPY1R, OLFM1, PDGFC, PDZK1, PIK3R1, PIK3R3, PPP1R3D, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, SCUBE2, SDC2, SEMA3C, SERPINE2, SGK3, SLC19A2, SLC24A3, SLC39A6, SOCS2, SPARC, STXBP6, TFAP2C, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TUBB2A, VAV3, VIM, WNT5A, WWOX, ZYX	105
Cancer	Tumor	Tumor	$9.06 \times 10^{-21}$	ABAT, ABCB1, ADA, AGR2, AKAP12, AKT3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, C6ORF211, CA2, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, COL1A1, COL4A1, COL4A2, CREBBP, CTGF, CYP1B1, CYR61, ECM1, EGFR, EPCAM, ESR1, EXT1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GPX1, GPX3, GSTP1, HIST2H2AA3, HMGA1, HMGA2, HNMT, ID2, IGFBP3, IGFBP5, IL7R, INSIG1, ISOC1, KLF4, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MSLN, MSMB, MSX2, MT1E, MUC1, MYL9 (includes EG:10398), NNMT, NOV, NPY1R, OLFM1, PDGFC, PDZK1, PIK3R1, PIK3R3, PPP1R3D, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, SCUBE2, SDC2, SEMA3C, SERPINE2, SGK3, SLC19A2, SLC24A3, SLC39A6, SOCS2, SPARC, STXBP6, TFAP2C, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TUBB2A, VAV3, VIM, WNT5A, WWOX, ZYX	106
Cancer	Malignant tumor	Malignant tumor	$3.21 \times 10^{-20}$	ABAT, ABCB1, ADA, AGR2, AKAP12, AKT3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, C6ORF211, CA2, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, COL1A1, COL4A1, COL4A2, CREBBP, CYP1B1, CYR61, ECM1, EGFR, EPCAM, ESR1, EXT1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GPX1, GPX3, GSTP1, HIST2H2AA3, HMGA1, HMGA2, HNMT, ID2, IGFBP3, IGFBP5, INSIG1, KLF4, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MSLN, MSMB, MSX2, MT1E, MUC1, MYL9 (includes EG:10398), NNMT, NPY1R, OLFM1, PDGFC, PDZK1, PIK3R1, PIK3R3, PPP1R3D, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, SCUBE2, SDC2, SEMA3C, SERPINE2, SGK3, SLC19A2, SLC24A3, SLC39A6, SOCS2, SPARC, STXBP6, TFAP2C, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TUBB2A, VAV3, VIM, WNT5A, WWOX, ZYX	102

Cancer	Carcinoma	Carcinoma	$4.48 \times 10^{-18}$	ABAT, ABCB1, AGR2, AKT3, ANXA1, ANXA9, AREG, AXL, B2M, BEX1, BMP7, C6ORF211, CA2, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, COL1A1, CREBBP, CYP1B1, CYR61, ECM1, EGFR, EPCAM, ESR1, FABP5, FBN2 (includes EG:2201), FHL2, FN1, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GPX3, GSTP1, HIST2H2AA3, HMGA2, IGFBP3, IGFBP5, INSIG1, KRT7, KRT19, LOX, MAFB, MCAM, MGP, MSLN, MSMB, MSX2, MT1E, MUC1, MYL9 (includes EG:10398), NNMT, NPY1R, PDZK1, PIK3R1, PRAME (includes EG:23532), PSAT1, RB1, RET, RRAS, SCUBE2, SEMA3C, SERPINE2, SLC19A2, SLC39A6, SOCS2, TFF1, TFF3, TFPI2, TGFB1, TM4SF1, TUBB2A, VAV3, VIM, WNT5A, WWOX	81
Cancer	Ovarian cancer	Ovarian cancer	$1.16 \times 10^{-16}$	ABCB1, ADA, AGR2, AKT3, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, COL4A1, EGFR, EPCAM, ESR1, FN1, FYN, GPX3, HIST2H2AA3, HMGA1, HMGA2, IGF2BP3, MCAM, MGP, MMP1 (includes EG:4312), MSLN, MUC1, PRAME (includes EG:23532), PSAT1, RET, RRAS, S100P, SEMA3C, SLC16A3, TACSTD2, TFF3, TFPI2, TUBB2A, VAV3	38
Cancer	Colorectal cancer	Colorectal cancer	$5.18 \times 10^{-15}$	AKR1C2, AKT3, ANK3, BEX1, BMP7, BST2, CA2, CALD1, CDH2, CDKN2A, CLDN3, CLGN, COL4A1, COL4A2, COL6A1, COL6A2, CRIP1, CTGF, CXCL12, CYP1B1, EGFR, EMP1, EPCAM, FBN2 (includes EG:2201), FN1, FSCN1, FYN, GDF15, GJA1, GLUL, GREB1, HIST1H2BD, HIST1H4H (includes EG:8365), ICAM1, ID2, IGFBP5, INSIG1, IRS1, MAFB, MCAM, MLPH, NUAK1, RET, SERPINA3, SERPINE1, SERTAD2, SLC12A8, SLC16A3, SRPX, STXBP6, TFF3, TM4SF1, TPD52L1, TUBB2A	54
Cancer	Breast carcinoma	Breast carcinoma	$4.51 \times 10^{-11}$	ABAT, ABCB1, AGR2, ANXA1, ANXA9, AREG, BEX1, BMP7, C6ORF211, CDH2, CEACAM6 (includes EG:4680), ECM1, EGFR, ESR1, FBN2 (includes EG:2201), FSCN1, GATA3, GFRA1, IGFBP3, MT1E, MUC1, NPY1R, PRAME (includes EG:23532), RB1, SCUBE2, SLC19A2, SLC39A6, TFF1, TUBB2A	29
Cancer	Mammary tumor	Mammary tumor	$1.15 \times 10^{-10}$	ABAT, ABCB1, AGR2, AKT3, ANXA1, ANXA9, AREG, BEX1, BMP7, C6ORF211, CDH2, CEACAM6 (includes EG:4680), ECM1, EGFR, ESR1, FBN2 (includes EG:2201), FSCN1, GATA3, GFRA1, IGFBP3, MT1E, MUC1, NPY1R, PRAME (includes EG:23532), RB1, RET, SCUBE2, SLC19A2, SLC39A6, TFF1, TUBB2A	31
Cancer	Breast cancer	Breast cancer	$1.58 \times 10^{-10}$	ABAT, ABCB1, ADA, AGR2, AKR1C2, AKT3, ANXA1, ANXA9, AREG, BEX1, BMP7, BRIP1, C6ORF211, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, CLGN, COL1A1, CYR61, ECM1, EGFR, ESR1, FBN2 (includes EG:2201), FSCN1, FYN, GATA3, GFRA1, HEY2, HIST2H2BE, HMGA1, IGFBP3, KLF4, MT1E, MUC1, NPY1R, PRAME (includes EG:23532), RB1, RET, S100A14, SCUBE2, SGK3, SLC19A2, SLC39A6, SPARC, TACSTD2, TFF1, TGFB1, TUBB2A, WWOX	50

Cancer	Pancreatic tumor	Pancreatic tumor	$3.40 \times 10^{-9}$	<i>AXL, CDKN2A, CREBBP, CYR61, EGFR, FN1, IGFBP3, IGFBP5, KLF4, KRT7, KRT19, MSLN, MSX2, PIK3R1, RET, SERPINE2, TFF1, TUBB2A</i>	18
Cancer	Digestive organ tumor	Digestive organ tumor	$3.56 \times 10^{-9}$	<i>ABCB1, AKT3, ANXA1, AXL, CA2, CDH1, CDKN2A, COL1A1, CREBBP, CYR61, EGFR, FN1, FSCN1, FYN, GDF15, GJA1, GSTP1, IGFBP3, IGFBP5, INSIG1, KLF4, KRT7, KRT19, MSLN, MSX2, NNMT, PIK3R1, RB1, RET, SERPINE2, TFF1, TM4SF1, TUBB2A, VIM, WWOX</i>	35
Cancer	Genital tumor	Genital tumor	$1.36 \times 10^{-8}$	<i>ABAT, ABCB1, ADA, AKT3, CD24, CLDN3, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, HIST2H2AA3, HMGA2, IGFBP3, KRT7, MCAM, MGP, MSLN, MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, RRAS, SEMA3C, TFF3, TFPI2, TUBB2A, VAV3</i>	33
Cancer	Pancreatic cancer	Pancreatic cancer	$6.91 \times 10^{-8}$	<i>AXL, CDH2, CDKN2A, CREBBP, CYR61, EGFR, FBN2 (includes EG:2201), FN1, FYN, IGFBP3, IGFBP5, KLF4, KRT7, KRT19, MSLN, MSX2, PIK3R1, RET, SERPINE2, TFF1, TUBB2A</i>	21
Cancer	Gonadal tumor	Gonadal tumor	$7.95 \times 10^{-7}$	<i>ABCB1, ADA, CD24, CLDN3, EGFR, EPCAM, GPX3, HIST2H2AA3, HMGA2, MCAM, MGP, MSLN, MUC1, RET, RRAS, SEMA3C, TFPI2, TUBB2A, VAV3</i>	19
Cancer	Ovarian tumor	Ovarian tumor	$1.73 \times 10^{-6}$	<i>ABCB1, CD24, CLDN3, EGFR, EPCAM, GPX3, HIST2H2AA3, HMGA2, MCAM, MGP, MSLN, MUC1, RET, RRAS, SEMA3C, TFPI2, TUBB2A, VAV3</i>	18
Cancer	Non-small cell lung cancer	Non-small cell lung cancer	$2.45 \times 10^{-6}$	<i>AKT3, B2M, CDH1, CDKN2A, DNAJB4, EGFR, EPCAM, FN1, FYN, MAFB, MSLN, RB1, RET, S100P, TUBB2A</i>	15
Cancer	Prostate cancer	Prostate cancer	$6.19 \times 10^{-6}$	<i>ABAT, AKT3, CDH1, COL1A1, CYP1B1, DNAJC15, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, IGFBP3, IL7R, KRT7, MMP1 (includes EG:4312), MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, TFF3, TUBB2A, WWOX</i>	27
Cancer	Clear-cell ovarian carcinoma	Clear-cell ovarian carcinoma	$7.74 \times 10^{-6}$	<i>CLDN3, EPCAM, GPX3, HMGA2, MGP, MUC1</i>	6
Cancer	Colon cancer	Colon cancer	$8.99 \times 10^{-6}$	<i>AKT3, BMP7, BST2, CA2, CALD1, CLDN3, COL6A1, COL6A2, CRIP1, EGFR, FN1, FSCN1, GDF15, GJA1, HIST1H2BD, HIST1H4H (includes EG:8365), INSIG1, MCAM, SERPINA3, SERPINE1, STXBP6, TFF3, TPD52L1, TUBB2A</i>	24
Cancer	Carcinoma in situ	Carcinoma in situ	$1.60 \times 10^{-5}$	<i>FHL2, GATA3, GPX3, HMGA2, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	10
Cancer	Prostatic intraepithelial neoplasia	Prostatic intraepithelial neoplasia	$2.72 \times 10^{-5}$	<i>ESR1, FHL2, GATA3, GPX3, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	10
Cancer	Uterine tumor	Uterine tumor	$3.42 \times 10^{-5}$	<i>CD24, CDH1, CDH2, CYP1B1, CYR61, EGFR, ESR1, HMGA1, HNMT, IGFBP5, OLFM1, PIK3R3, PPP1R3D, RB1, RET, SLC24A3, STXBP6, TFAP2C, TGFB1, TUBB2A, ZYX</i>	21

Cancer	Pancreatic adenocarcinoma	Pancreatic adenocarcinoma	$3.67 \times 10^{-5}$	<i>AXL, CYR61, IGFBP3, KRT7, KRT19, MSLN, SERPINE2</i>	7
Cancer	Head and neck tumor	Head and neck tumor	$3.69 \times 10^{-5}$	<i>ABAT, AKT3, ANXA1, CDKN2A, CREBBP, EGFR, EPCAM, ESR1, FABP5, FN1, FYN, ID2, IGFBP5, INSIG1, PDGFC, PIK3R1, RB1, RET, TGFB1, TUBB2A</i>	20
Cancer	Non-small-cell lung carcinoma	Non-small-cell lung carcinoma	$4.92 \times 10^{-5}$	<i>AKT3, B2M, CDKN2A, EGFR, EPCAM, FN1, FYN, MAFB, MSLN, RB1, RET, TUBB2A</i>	12
Cancer	Prostatic carcinoma	Prostatic carcinoma	$5.27 \times 10^{-5}$	<i>ABAT, AKT3, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, IGFBP3, KRT7, MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, TFF3, TUBB2A</i>	20
Cancer	Oral cancer	Oral cancer	$6.50 \times 10^{-5}$	<i>CDKN2A, CREBBP, EGFR, FN1, IGFBP5, INSIG1, PIK3R1, RET</i>	8
Cancer	Prostatic intraepithelial tumor	Prostatic intraepithelial tumor	$8.92 \times 10^{-5}$	<i>FHL2, GATA3, GPX3, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	9
Cancer	Serous ovarian carcinoma	Serous ovarian carcinoma	$9.31 \times 10^{-5}$	<i>CD24, CLDN3, EPCAM, GPX3, HIST2H2AA3, MCAM, MGP, RRAS, SEMA3C, TFPI2, VAV3</i>	11
Cancer	Lung carcinoma	Lung carcinoma	$9.52 \times 10^{-5}$	<i>ABCB1, AKT3, B2M, CDKN2A, CLDN3, EGFR, EPCAM, FN1, FYN, LOX, MAFB, MSLN, RB1, RET, TUBB2A</i>	15
Cancer	Leiomyoma	Leiomyoma	$9.97 \times 10^{-5}$	<i>CD24, CTGF, CYP1B1, CYR61, EGFR, ESR1, HNMT, IGFBP5, ISOC1, NOV, OLFM1, PIK3R3, PPP1R3D, SLC24A3, STXBP6, TFAP2C, TGFB1, ZYX</i>	18
Cancer	Endometrioid carcinoma	Endometrioid carcinoma	$1.19 \times 10^{-4}$	<i>CLDN3, EPCAM, GPX3, HMGA2, MGP</i>	5
Cancer	Neuroendocrine tumor	Neuroendocrine tumor	$1.25 \times 10^{-4}$	<i>AXL, CYR61, EGFR, IGFBP3, KRT7, KRT19, MSLN, MSX2, RET, SERPINE2, TUBB2A</i>	11
Cancer	Benign tumor	Benign tumor	$2.26 \times 10^{-4}$	<i>CD24, CTGF, CYP1B1, CYR61, EGFR, ESR1, FYN, GSTP1, HNMT, IGFBP5, ISOC1, NOV, OLFM1, PIK3R3, PPP1R3D, RET, SLC24A3, STXBP6, TFAP2C, TGFB1, ZYX</i>	21
Cancer	Peripheral T-cell lymphoma	Peripheral T-cell lymphoma	$2.76 \times 10^{-4}$	<i>COL4A1, COL4A2, CYR61, FN1, NNMT</i>	5
Cancer	Endocrine gland tumor	Endocrine gland tumor	$3.03 \times 10^{-4}$	<i>ABCB1, AXL, CYR61, EGFR, IGFBP3, KRT7, KRT19, MSLN, MSX2, RET, SERPINE2, TGFB1, TUBB2A</i>	13
Cancer	Neuroendocrine carcinoma	Neuroendocrine carcinoma	$3.62 \times 10^{-4}$	<i>AXL, CYR61, EGFR, IGFBP3, KRT7, KRT19, MSLN, MSX2, SERPINE2</i>	9
Cancer	Pancreatic carcinoma	Pancreatic carcinoma	$4.17 \times 10^{-4}$	<i>AXL, CYR61, IGFBP3, KRT7, KRT19, MSLN, MSX2, SERPINE2</i>	8
Cancer	Lung cancer	Lung cancer	$8.27 \times 10^{-4}$	<i>ABCB1, AKT3, B2M, CDH1, CDKN2A, CLDN3, DNAJB4, EGFR, EPCAM, FN1, FYN, LOX, MAFB, MSLN, RB1, RET, S100P, TUBB2A</i>	18

Cancer	Adenocarcinoma	Adenocarcinoma	$1.12 \times 10^{-3}$	<i>ANXA1, CDH1, CLDN3, EGFR, ESR1, GJA1, GSTP1, LOX, RET, SERPINE2, TM4SF1, TUBB2A, VIM</i>	13
Cancer	Sarcoma	Sarcoma	$1.15 \times 10^{-3}$	<i>ABCB1, CDH1, CDKN2A, EGFR, EXT1, FYN, HMGA1, RB1, RET, SDC2, SPARC, TUBB2A</i>	12
Cancer	Acinar-cell carcinoma	Acinar-cell carcinoma	$1.21 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, PIK3R1</i>	4
Cancer	Esophageal carcinoma	Esophageal carcinoma	$1.21 \times 10^{-3}$	<i>EGFR, GSTP1, RB1, WWOX</i>	4
Cancer	Serous ovarian carcinoma process	Serous ovarian carcinoma process	$1.28 \times 10^{-3}$	<i>CLDN3, MSLN, MUC1</i>	3
Cancer	Lymphoma	Lymphoma	$1.57 \times 10^{-3}$	<i>ABCB1, ADA, AKT3, CDKN2A, COL4A1, COL4A2, CYR61, FN1, FYN, ID2, NNMT, RET, TUBB2A</i>	13
Cancer	Osteosarcoma	Osteosarcoma	$1.68 \times 10^{-3}$	<i>CDKN2A, FYN, RB1, SDC2, SPARC</i>	5
Cancer	Neuroepithelial tumor	Neuroepithelial tumor	$1.91 \times 10^{-3}$	<i>AKAP12, AKT3, CDKN2A, EGFR, ESR1, ID2, PDGFC, RB1, RET</i>	9
Cancer	Hyperproliferation	Hyperproliferation	$1.92 \times 10^{-3}$	<i>AREG, CDH1, EGFR, ESR1, MMP1 (includes EG:4312), RET</i>	6
Cancer	Salivary gland tumor	Salivary gland tumor	$1.92 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, INSIG1, PIK3R1, RET</i>	6
Cancer	Papillary thyroid carcinoma	Papillary thyroid carcinoma	$2.10 \times 10^{-3}$	<i>EGFR, FN1, RET, TFF3, VIM, WNT5A</i>	6
Cancer	Bone tumor	Bone tumor	$2.42 \times 10^{-3}$	<i>ADA, CDKN2A, EXT1, FYN, RB1, RET, SDC2, SPARC</i>	8
Cancer	Ductal carcinoma	Ductal carcinoma	$2.59 \times 10^{-3}$	<i>ABAT, ANXA1, ANXA9, CDH2, ECM1, FBN2 (includes EG:2201), MT1E</i>	7
Cancer	Glioma	Glioma	$2.74 \times 10^{-3}$	<i>AKT3, CDKN2A, EGFR, ESR1, ID2, PDGFC, RB1, RET</i>	8
Cancer	Mucoepidermoid carcinoma	Mucoepidermoid carcinoma	$2.94 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, INSIG1, PIK3R1</i>	5
Cancer	T-cell non-Hodgkin lymphoma	T-cell non-Hodgkin lymphoma	$2.95 \times 10^{-3}$	<i>AKT3, COL4A1, COL4A2, CYR61, FN1, NNMT</i>	6
Cancer	Ductal carcinoma in situ	Ductal carcinoma in situ	$3.07 \times 10^{-3}$	<i>ANXA1, ESR1</i>	2
Cancer	Malignancy	Malignancy of tumor	$3.07 \times 10^{-3}$	<i>EGFR, ID2</i>	2
Cancer	Brain tumor	Brain tumor	$3.08 \times 10^{-3}$	<i>ABAT, AKT3, CDKN2A, EGFR, ESR1, FYN, ID2, PDGFC, RB1, RET, TGFB1, TUBB2A</i>	12
Cancer	Astrocytoma	Astrocytoma	$3.20 \times 10^{-3}$	<i>AKT3, EGFR, ESR1, ID2, PDGFC, RET</i>	6

Cancer	Ovarian carcinoma	Ovarian carcinoma	$3.20 \times 10^{-3}$	<i>ABCB1, EGFR, EPCAM, HMGA2, MSLN, TUBB2A</i>	6
Cancer	Lymphatic node tumor	Lymphatic node tumor	$4.48 \times 10^{-3}$	<i>AKT3, CDKN2A, COL4A1, COL4A2, CYR61, FN1, FYN, ID2, NNMT, TUBB2A</i>	10
Cancer	Glioblastoma	Glioblastoma	$4.76 \times 10^{-3}$	<i>AKT3, EGFR, ESR1, PDGFC, RET</i>	5
Cancer	Prolactinoma	Prolactinoma	$5.04 \times 10^{-3}$	<i>EGFR, ESR1</i>	2
Cancer	Esophageal cancer	Esophageal cancer	$5.28 \times 10^{-3}$	<i>ADA, EGFR, GSTP1, RB1, RET, TUBB2A, WWOX</i>	7
Cancer	Transformation	Transformation	$5.77 \times 10^{-3}$	<i>AXL, CDH1, EGFR, ESR1, IRS1, NRCAM, PIK3R1, RASIP1, RET, TFF3</i>	10
Cancer	Transformation	Transformation of cells	$1.47 \times 10^{-2}$	<i>AXL, EGFR, ESR1, IRS1, NRCAM, PIK3R1, RASIP1, RET, TFF3</i>	9
Cancer	Transformation	Transformation of eukaryotic cells	$1.57 \times 10^{-2}$	<i>AXL, EGFR, ESR1, IRS1, NRCAM, PIK3R1, RASIP1, TFF3</i>	8
Cancer	Mucinous ovarian carcinoma	Mucinous ovarian carcinoma	$6.46 \times 10^{-3}$	<i>EPCAM, GPX3, MGP</i>	3
Cancer	Cholangiocarcinoma	Cholangiocarcinoma	$6.65 \times 10^{-3}$	<i>ANXA1, EGFR, TM4SF1, VIM</i>	4
Cancer	Cervical carcinoma	Cervical carcinoma	$7.27 \times 10^{-3}$	<i>CDH1, CDH2, RB1, TGFB1, TUBB2A</i>	5
Cancer	Squamous cell tumor	Squamous cell tumor	$7.32 \times 10^{-3}$	<i>CDKN2A, EGFR, FYN, GPX1, GSTP1, HMGA2, PDZK1, SOCS2, TUBB2A, WWOX</i>	10
Cancer	Leiomyosarcoma	Leiomyosarcoma	$7.40 \times 10^{-3}$	<i>CDKN2A, FYN, HMGA1, RET</i>	4
Cancer	Uterine leiomyoma	Uterine leiomyoma	$8.33 \times 10^{-3}$	<i>CD24, CYR61, EGFR, HNMT, IGFBP5, OLFM1, PIK3R3, PPP1R3D, SLC24A3, STXBP6, TFAP2C, ZYX</i>	12
Cancer	Colorectal tumor	Colorectal tumor	$9.49 \times 10^{-3}$	<i>AKT3, EGFR, FSCN1, GDF15, GJA1, INSIG1, RET, TUBB2A</i>	8
Cancer	Renal cancer	Renal cancer	$9.69 \times 10^{-3}$	<i>ABCB1, CDH1, EGFR, EPCAM, FN1, IL7R, RB1, RET, TUBB2A</i>	9
Cancer	Chemotherapy resistance	Chemotherapy resistance of tumor cell lines	$1.03 \times 10^{-2}$	<i>AXL, EGFR</i>	2
Cancer	Myosarcoma	Myosarcoma	$1.06 \times 10^{-2}$	<i>CDKN2A, FYN, HMGA1, RET, TUBB2A</i>	5
Cancer	Non-hodgkin lymphoma	Non-hodgkin lymphoma	$1.13 \times 10^{-2}$	<i>AKT3, CDKN2A, COL4A1, COL4A2, CYR61, FN1, FYN, NNMT, TUBB2A</i>	9
Cancer	Cervical cancer	Cervical cancer	$1.18 \times 10^{-2}$	<i>CDH1, CDH2, EGFR, RB1, RET, TGFB1, TUBB2A</i>	7
Cancer	Metastasis	Metastasis	$1.21 \times 10^{-2}$	<i>ABCB1, CYP1B1, EGFR, FYN, TUBB2A, VIM</i>	6
Cancer	Chondrosarcoma	Chondrosarcoma	$1.35 \times 10^{-2}$	<i>EXT1, FYN</i>	2

Cancer	Renal-cell carcinoma	Renal-cell carcinoma	$1.35 \times 10^{-2}$	<i>ABCB1, CDH1, EGFR, FN1, RB1, RET, TUBB2A</i>	7
Cancer	Squamous-cell carcinoma	Squamous-cell carcinoma	$1.63 \times 10^{-2}$	<i>CDKN2A, EGFR, FYN, GSTP1, HMGA2, PDZK1, SOCS2, TUBB2A, WWOX</i>	9
Reproductive system disease	Ovarian cancer	Ovarian cancer	$1.16 \times 10^{-16}$	<i>ABCB1, ADA, AGR2, AKT3, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, COL4A1, EGFR, EPCAM, ESR1, FN1, FYN, GPX3, HIST2H2AA3, HMGA1, HMGA2, IGF2BP3, MCAM, MGP, MMP1 (includes EG:4312), MSLN, MUC1, PRAME (includes EG:23532), PSAT1, RET, RRAS, S100P, SEMA3C, SLC16A3, TACSTD2, TFF3, TFPI2, TUBB2A, VAV3</i>	38
Reproductive system disease	Breast carcinoma	Breast carcinoma	$4.51 \times 10^{-11}$	<i>ABAT, ABCB1, AGR2, ANXA1, ANXA9, AREG, BEX1, BMP7, C6ORF211, CDH2, CEACAM6 (includes EG:4680), ECM1, EGFR, ESR1, FBN2 (includes EG:2201), FSCN1, GATA3, GFRA1, IGFBP3, MT1E, MUC1, NPY1R, PRAME (includes EG:23532), RB1, SCUBE2, SLC19A2, SLC39A6, TFF1, TUBB2A</i>	29
Reproductive system disease	Mammary tumor	Mammary tumor	$1.15 \times 10^{-10}$	<i>ABAT, ABCB1, AGR2, AKT3, ANXA1, ANXA9, AREG, BEX1, BMP7, C6ORF211, CDH2, CEACAM6 (includes EG:4680), ECM1, EGFR, ESR1, FBN2 (includes EG:2201), FSCN1, GATA3, GFRA1, IGFBP3, MT1E, MUC1, NPY1R, PRAME (includes EG:23532), RB1, RET, SCUBE2, SLC19A2, SLC39A6, TFF1, TUBB2A</i>	31
Reproductive system disease	Breast cancer	Breast cancer	$1.58 \times 10^{-10}$	<i>ABAT, ABCB1, ADA, AGR2, AKR1C2, AKT3, ANXA1, ANXA9, AREG, BEX1, BMP7, BRIP1, C6ORF211, CDH2, CDKN2A, CEACAM6 (includes EG:4680), CLDN3, CLGN, COL1A1, CYR61, ECM1, EGFR, ESR1, FBN2 (includes EG:2201), FSCN1, FYN, GATA3, GFRA1, HEY2, HIST2H2BE, HMGA1, IGFBP3, KLF4, MT1E, MUC1, NPY1R, PRAME (includes EG:23532), RB1, RET, S100A14, SCUBE2, SGK3, SLC19A2, SLC39A6, SPARC, TACSTD2, TFF1, TGFB1, TUBB2A, WWOX</i>	50
Reproductive system disease	Genital tumor	Genital tumor	$1.36 \times 10^{-8}$	<i>ABAT, ABCB1, ADA, AKT3, CD24, CLDN3, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, HIST2H2AA3, HMGA2, IGFBP3, KRT7, MCAM, MGP, MSLN, MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, RRAS, SEMA3C, TFF3, TFPI2, TUBB2A, VAV3</i>	33
Reproductive system disease	Endometriosis	Endometriosis	$4.03 \times 10^{-8}$	<i>ANK3, BCAT1, CCR10, COL6A1, COL6A2, CTGF, CXADR, CYR61, EGFR, ESR1, FN1, GATA3, GPX3, GSTP1, HMGA2, ICAM1, IL18, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MT1E, MUC1, OLFM1, PIK3R1, SDC2, SLC16A1, STC1, TGFB1, TGFBI, UCHL1, VIM</i>	30
Reproductive system disease	Reproductive system disorder	Reproductive system disorder	$6.95 \times 10^{-8}$	<i>ANK3, BCAT1, CCR10, COL6A1, COL6A2, CRIP1, CTGF, CXADR, CYR61, EGFR, EML1 (includes EG:2009), ESR1, FN1, GATA3, GPX1, GPX3, GSTP1, HMGA2, ICAM1, IL18, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MT1E, MUC1, OLFM1, OXTR, PIK3R1, SDC2, SLC16A1, STC1, STXBP6, TGFB1, TGFBI, UCHL1, VIM, XIST</i>	36

Reproductive system disease	Gonadal tumor	Gonadal tumor	$7.95 \times 10^{-7}$	<i>ABCB1, ADA, CD24, CLDN3, EGFR, EPCAM, GPX3, HIST2H2AA3, HMGA2, MCAM, MGP, MSLN, MUC1, RET, RRAS, SEMA3C, TFPI2, TUBB2A, VAV3</i>	19
Reproductive system disease	Ovarian tumor	Ovarian tumor	$1.73 \times 10^{-6}$	<i>ABCB1, CD24, CLDN3, EGFR, EPCAM, GPX3, HIST2H2AA3, HMGA2, MCAM, MGP, MSLN, MUC1, RET, RRAS, SEMA3C, TFPI2, TUBB2A, VAV3</i>	18
Reproductive system disease	Prostate cancer	Prostate cancer	$6.19 \times 10^{-6}$	<i>ABAT, AKT3, CDH1, COL1A1, CYP1B1, DNAJC15, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, IGFBP3, IL7R, KRT7, MMP1 (includes EG:4312), MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, TFF3, TUBB2A, WWOX</i>	27
Reproductive system disease	Clear-cell ovarian carcinoma	Clear-cell ovarian carcinoma	$7.74 \times 10^{-6}$	<i>CLDN3, EPCAM, GPX3, HMGA2, MGP, MUC1</i>	6
Reproductive system disease	Prostatic intraepithelial neoplasia	Prostatic intraepithelial neoplasia	$2.72 \times 10^{-5}$	<i>ESR1, FHL2, GATA3, GPX3, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	10
Reproductive system disease	Uterine tumor	Uterine tumor	$3.42 \times 10^{-5}$	<i>CD24, CDH1, CDH2, CYP1B1, CYR61, EGFR, ESR1, HMGA1, HNMT, IGFBP5, OLFM1, PIK3R3, PPP1R3D, RB1, RET, SLC24A3, STXBP6, TFAP2C, TGFB1, TUBB2A, ZYX</i>	21
Reproductive system disease	Prostatic carcinoma	Prostatic carcinoma	$5.27 \times 10^{-5}$	<i>ABAT, AKT3, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, IGFBP3, KRT7, MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, TFF3, TUBB2A</i>	20
Reproductive system disease	Prostatic intraepithelial tumor	Prostatic intraepithelial tumor	$8.92 \times 10^{-5}$	<i>FHL2, GATA3, GPX3, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	9
Reproductive system disease	Serous ovarian carcinoma	Serous ovarian carcinoma	$9.31 \times 10^{-5}$	<i>CD24, CLDN3, EPCAM, GPX3, HIST2H2AA3, MCAM, MGP, RRAS, SEMA3C, TFPI2, VAV3</i>	11
Reproductive system disease	Endometrioid carcinoma	Endometrioid carcinoma	$1.19 \times 10^{-4}$	<i>CLDN3, EPCAM, GPX3, HMGA2, MGP</i>	5
Reproductive system disease	Serous ovarian carcinoma process	Serous ovarian carcinoma process	$1.28 \times 10^{-3}$	<i>CLDN3, MSLN, MUC1</i>	3
Reproductive system disease	Ductal carcinoma	Ductal carcinoma	$2.59 \times 10^{-3}$	<i>ABAT, ANXA1, ANXA9, CDH2, ECM1, FBN2 (includes EG:2201), MT1E</i>	7
Reproductive system disease	Ductal carcinoma in situ	Ductal carcinoma in situ	$3.07 \times 10^{-3}$	<i>ANXA1, ESR1</i>	2

Reproductive system disease	Ovarian carcinoma	Ovarian carcinoma	$3.20 \times 10^{-3}$	<i>ABCB1, EGFR, EPCAM, HMGA2, MSLN, TUBB2A</i>	6
Reproductive system disease	Mucinous ovarian carcinoma	Mucinous ovarian carcinoma	$6.46 \times 10^{-3}$	<i>EPCAM, GPX3, MGP</i>	3
Reproductive system disease	Cervical carcinoma	Cervical carcinoma	$7.27 \times 10^{-3}$	<i>CDH1, CDH2, RB1, TGFB1, TUBB2A</i>	5
Reproductive system disease	Uterine leiomyoma	Uterine leiomyoma	$8.33 \times 10^{-3}$	<i>CD24, CYR61, EGFR, HNMT, IGFBP5, OLFM1, PIK3R3, PPP1R3D, SLC24A3, STXBP6, TFAP2C, ZYX</i>	12
Reproductive system disease	Adenomyosis	Adenomyosis	$9.16 \times 10^{-3}$	<i>CRIP1, ESR1, GPX1, STXBP6, XIST</i>	5
Reproductive system disease	Cervical cancer	Cervical cancer	$1.18 \times 10^{-2}$	<i>CDH1, CDH2, EGFR, RB1, RET, TGFB1, TUBB2A</i>	7
Cellular growth and proliferation	Proliferation	Proliferation of cells	$1.38 \times 10^{-15}$	<i>AKT3, ANXA1, AREG, AXL, BCAT1, BDNF, BIN1, BMP7, BST2, BTG3, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), COL1A1, COL4A1, COL4A2, CRIP1, CTGF, CXCL12, CYR61, DNAJB4, ECM1, EGFR, EIF5A, EMP1, EMP3, EPCAM, ESR1, FABP5, FKBP1B, FN1, FOSL1, FSCN1, HMGA1, ICAM1, ID2, IFI16, IGF2BP3, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, INSIG1, IRS1, KLF4, LAMB1, LOX, MGP, MSX2, MYB (includes EG:4602), NCOA3, NDN, NOV, OXTR, PDGFC, PDZK1, PTPRK, RB1, RET, RLN2, S100P, SDC2, SERPINE1, SOCS2, SPARC, STC1, TACSTD2, TBX2, TFPI2, TGFB1, TGFB1I1, TGFBI, TNFRSF6B, UGT2B15, WNT5A</i>	78
Cellular growth and proliferation	Proliferation	Proliferation of eukaryotic cells	$1.92 \times 10^{-13}$	<i>AKT3, ANXA1, AREG, AXL, BDNF, BMP7, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), COL1A1, COL4A1, COL4A2, CTGF, CXCL12, CYR61, DNAJB4, ECM1, EGFR, EPCAM, ESR1, FABP5, FKBP1B, FN1, FSCN1, HMGA1, ICAM1, ID2, IFI16, IGF2BP3, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, IRS1, LAMB1, LOX, MGP, MSX2, MYB (includes EG:4602), NCOA3, NOV, OXTR, PDGFC, PTPRK, RB1, RET, RLN2, S100P, SDC2, SERPINE1, SOCS2, SPARC, STC1, TFPI2, TGFB1, TNFRSF6B, UGT2B15, WNT5A</i>	61

Cellular growth and proliferation	Proliferation	Proliferation of cell lines	$6.99 \times 10^{-13}$	<i>AKT3, ANXA1, AREG, AXL, BDNF, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), COL1A1, CTGF, CXCL12, CYR61, DNAJB4, EGFR, EPCAM, ESR1, FABP5, FKBP1B, FN1, FSCN1, HMGA1, ID2, IFI16, IGF2BP3, IGFBP3, IGFBP5, IGFBP6, IRS1, LOX, MSX2, MYB (includes EG:4602), NCOA3, NOV, OXTR, RB1, RET, S100P, SDC2, SERPINE1, SOCS2, SPARC, TFPI2, TGFB1, TNFRSF6B, UGT2B15, WNT5A</i>	48
Cellular growth and proliferation	Proliferation	Proliferation of tumor cell lines	$1.67 \times 10^{-9}$	<i>AKT3, ANXA1, AREG, AXL, BDNF, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), COL1A1, CTGF, CXCL12, CYR61, DNAJB4, EGFR, EPCAM, ESR1, FABP5, HMGA1, ID2, IGF2BP3, IGFBP3, IGFBP5, MSX2, MYB (includes EG:4602), NCOA3, NOV, RB1, RET, SERPINE1, SPARC, TFPI2, TGFB1, UGT2B15, WNT5A</i>	36
Cellular growth and proliferation	Proliferation	Proliferation of normal cells	$4.10 \times 10^{-6}$	<i>AXL, BMP7, CD24, CDH2, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, ECM1, EGFR, FN1, HMGA1, ICAM1, IGFBP3, IGFBP5, IL18, IL7R, LAMB1, MGP, PDGFC, PTPRK, RLN2, SERPINE1, SPARC, STC1, TGFB1</i>	27
Cellular growth and proliferation	Proliferation	Proliferation of carcinoma cell lines	$4.22 \times 10^{-6}$	<i>AKT3, ANXA1, CXCL12, CYR61, DNAJB4, EGFR, NCOA3, RB1, TGFB1, WNT5A</i>	10
Cellular growth and proliferation	Proliferation	Proliferation of connective tissue cells	$6.22 \times 10^{-6}$	<i>CDKN2A, CTGF, FN1, IGFBP3, IGFBP5, IL18, PDGFC, RLN2, STC1, TGFB1</i>	10
Cellular growth and proliferation	Proliferation	Proliferation of chondrocytes	$1.79 \times 10^{-5}$	<i>CTGF, IGFBP3, IL18, STC1</i>	4
Cellular growth and proliferation	Proliferation	Proliferation of breast cancer cell lines	$9.31 \times 10^{-5}$	<i>BMP7, CDKN2A, CYR61, EGFR, ESR1, ID2, IGFBP3, MYB (includes EG:4602), NCOA3, SERPINE1, TGFB1</i>	11
Cellular growth and proliferation	Proliferation	Proliferation of lung cancer cell lines	$1.97 \times 10^{-4}$	<i>AKT3, ANXA1, AXL, CYR61, DNAJB4, EGFR, NCOA3, RB1</i>	8
Cellular growth and proliferation	Proliferation	Proliferation of breast cell lines	$4.02 \times 10^{-4}$	<i>CDH1, IGFBP3, LOX, TGFB1</i>	4
Cellular growth and proliferation	Proliferation	Proliferation of squamous cell carcinoma cell lines	$4.02 \times 10^{-4}$	<i>ANXA1, CDH1, EGFR, EPCAM</i>	4
Cellular growth and proliferation	Proliferation	Proliferation of pancreatic cancer cell lines	$1.45 \times 10^{-3}$	<i>CEACAM6 (includes EG:4680), HMGA1, MSX2, NCOA3</i>	4

Cellular growth and proliferation	Proliferation	Proliferation of thyroid tumor cell lines	$1.74 \times 10^{-3}$	<i>CXCL12, TGFB1, WNT5A</i>	3
Cellular growth and proliferation	Proliferation	Proliferation of lung cell lines	$2.28 \times 10^{-3}$	<i>CDKN2A, FN1, IFI16</i>	3
Cellular growth and proliferation	Proliferation	Proliferation of endothelial cells	$3.19 \times 10^{-3}$	<i>AXL, CDH2, COL4A1, COL4A2, ECM1, FN1, MGP</i>	7
Cellular growth and proliferation	Proliferation	Proliferation of colon cancer cell lines	$5.20 \times 10^{-3}$	<i>AREG, CD24, ID2, RB1, TGFB1</i>	5
Cellular growth and proliferation	Proliferation	Proliferation of epithelial cells	$6.18 \times 10^{-3}$	<i>EGFR, LAMB1, PTPRK, SPARC, TGFB1</i>	5
Cellular growth and proliferation	Proliferation	Proliferation of epidermal cells	$6.46 \times 10^{-3}$	<i>EGFR, PTPRK, TGFB1</i>	3
Cellular growth and proliferation	Proliferation	Proliferation of T lymphocytes	$1.28 \times 10^{-2}$	<i>CD24, CDKN2A, CXCL12, FN1, ICAM1, IL18, IL7R, TGFB1</i>	8
Cellular growth and proliferation	Proliferation	Proliferation of endocrine cells	$1.35 \times 10^{-2}$	<i>FN1, TGFB1</i>	2
Cellular growth and proliferation	Proliferation	Proliferation of fibroblast cell lines	$1.68 \times 10^{-2}$	<i>CDKN2A, CXCL12, FN1, S100P, TGFB1</i>	5
Cellular growth and proliferation	Growth	Growth of cells	$1.60 \times 10^{-12}$	<i>ABCB1, AKT3, ANXA1, AREG, BMP7, CALCR, CDA, CDH1, CDKN2A, COL6A1, COL6A2, CTGF, CXADR, CXCL12, CYR61, DBN1, DKK3, DNAJB4, ECM1, EGFR, EIF5A, ESR1, FBN2 (includes EG:2201), FHL2, FN1, FOSL1, GDF15, GFRA1, GJA1, GPX1, GPX3, GSTP1, HMGA1, HMGA2, ID2, IFI16, IGFBP3, IGFBP5, IRS1, KLF4, LAMB1, MCAM, MSX2, MUC1, MYL9 (includes EG:10398), NCOA3, NDN, NOV, NRCAM, OXTR, PDCD10, PEG10, PIK3R1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, SERPINE1, SERPINE2, SERTAD2, SPARC, TFAP2C, TFF3, TGFB1, TNFRSF6B, UBE2L6, XBP1, ZYX</i>	69

Cellular growth and proliferation	Growth	Growth of eukaryotic cells	$6.99 \times 10^{-12}$	<i>ABCB1, AKT3, ANXA1, AREG, BMP7, CALCR, CDH1, CDKN2A, CTGF, CXADR, CYR61, DKK3, DNAJB4, EGFR, EIF5A, ESR1, FHL2, FN1, FOSL1, GDF15, GFRA1, GJA1, HMGA1, HMGA2, ID2, IFI16, IGFBP3, IGFBP5, IRS1, KLF4, MCAM, MSX2, MYL9 (includes EG:10398), NCOA3, NOV, NRCAM, OXTR, PDCD10, PEG10, PIK3R1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, TFAP2C, TFF3, TGFB1, XBP1</i>	49
Cellular growth and proliferation	Growth	Growth of cell lines	$5.80 \times 10^{-11}$	<i>ABCB1, AKT3, ANXA1, AREG, BMP7, CALCR, CDH1, CDKN2A, CTGF, CXADR, CYR61, DKK3, DNAJB4, EGFR, EIF5A, ESR1, FN1, FOSL1, GDF15, GJA1, HMGA1, HMGA2, IFI16, IGFBP3, IGFBP5, IRS1, KLF4, MSX2, MYL9 (includes EG:10398), NCOA3, NOV, NRCAM, OXTR, PDCD10, PIK3R1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, TFAP2C, TGFB1, XBP1</i>	43
Cellular growth and proliferation	Growth	Growth of tumor cell lines	$1.55 \times 10^{-10}$	<i>ABCB1, AKT3, ANXA1, CDH1, CDKN2A, CTGF, CXADR, CYR61, DKK3, DNAJB4, EGFR, EIF5A, ESR1, FOSL1, GDF15, GJA1, HMGA1, HMGA2, IFI16, IGFBP3, IGFBP5, IRS1, KLF4, MSX2, MYL9 (includes EG:10398), NCOA3, NOV, PDCD10, PIK3R1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, TFAP2C, TGFB1, XBP1</i>	37
Cellular growth and proliferation	Growth	Growth of breast cancer cell lines	$3.81 \times 10^{-6}$	<i>CDH1, CYR61, EGFR, ESR1, GJA1, HMGA1, IGFBP3, IGFBP5, IRS1, NCOA3, TFAP2C, TGFB1, XBP1</i>	13
Cellular growth and proliferation	Growth	Growth of neuroblastoma cell lines	$2.29 \times 10^{-4}$	<i>EGFR, HMGA2, IGFBP5, RET</i>	4
Cellular growth and proliferation	Growth	Arrest in growth of eukaryotic cells	$8.52 \times 10^{-4}$	<i>AKT3, BMP7, CDKN2A, KLF4, PRAME (includes EG:23532), RB1, TGFB1</i>	7
Cellular growth and proliferation	Growth	Growth of epithelial cells	$8.74 \times 10^{-4}$	<i>AREG, EGFR, FHL2, ID2, RB1</i>	5
Cellular growth and proliferation	Growth	Growth of cancer cells	$1.20 \times 10^{-3}$	<i>CDKN2A, GFRA1, MCAM, PEG10, RB1, TFF3, TGFB1</i>	7
Cellular growth and proliferation	Growth	Growth of tumor cells	$1.34 \times 10^{-3}$	<i>CDKN2A, GFRA1, HMGA2, MCAM, PEG10, RB1, TFF3, TGFB1</i>	8

Cellular growth and proliferation	Growth	Growth of fibroblast cell lines	$1.66 \times 10^{-3}$	<i>EGFR, FN1, IGFBP3, IRS1, NRCAM, RET, TGFB1</i>	7
Cellular growth and proliferation	Growth	Growth of epidermal cells	$5.41 \times 10^{-3}$	<i>EGFR, FHL2, ID2</i>	3
Cellular growth and proliferation	Growth	Arrest in growth of cell lines	$6.18 \times 10^{-3}$	<i>AKT3, BMP7, KLF4, PRAME (includes EG:23532), TGFB1</i>	5
Cellular growth and proliferation	Growth	Growth of carcinoma cell lines	$6.19 \times 10^{-3}$	<i>AKT3, ANXA1, DNAJB4, IGFBP3, NOV, PIK3R1</i>	6
Cellular growth and proliferation	Growth	Growth of endometrial cancer cell lines	$7.45 \times 10^{-3}$	<i>CYR61, ESR1</i>	2
Cellular growth and proliferation	Growth	Growth of squamous cell carcinoma cell lines	$1.03 \times 10^{-2}$	<i>CDKN2A, EGFR</i>	2
Cellular growth and proliferation	Growth	Growth of prostate cancer cell lines	$1.14 \times 10^{-2}$	<i>CXADR, IFI16, IGFBP5, PDCD10, TGFB1</i>	5
Cellular growth and proliferation	Growth	Growth of lung cancer cell lines	$1.48 \times 10^{-2}$	<i>AKT3, ANXA1, DNAJB4, IGFBP3, PIK3R1</i>	5
Cellular growth and proliferation	Growth	Growth of normal cells	$1.51 \times 10^{-2}$	<i>AREG, CDKN2A, EGFR, FHL2, ID2, IGFBP5, RB1, TGFB1</i>	8
Cellular growth and proliferation	Growth	Growth of connective tissue cells	$1.52 \times 10^{-2}$	<i>AREG, CDKN2A, TGFB1</i>	3
Cellular growth and proliferation	Growth	Growth of pancreatic cancer cell lines	$1.52 \times 10^{-2}$	<i>IGFBP3, MSX2, NCOA3</i>	3
Cellular growth and proliferation	Colony formation	Colony formation by cells	$2.83 \times 10^{-5}$	<i>ANKRD1, CDA, CDKN2A, CEACAM5 (includes EG:1048), CXCL12, CYR61, EGFR, IFI16, IGFBP3, IRS1, NCOA3, PIK3R1, PLAGL1, RB1, SPARC, TGFB1, TGFB11</i>	17
Cellular growth and proliferation	Colony formation	Colony formation by eukaryotic cells	$1.45 \times 10^{-4}$	<i>ANKRD1, CDA, CDKN2A, CEACAM5 (includes EG:1048), CYR61, EGFR, IFI16, IGFBP3, IRS1, NCOA3, PIK3R1, RB1, SPARC, TGFB1, TGFB11</i>	15



Cellular movement	Invasion	Invasion of prostate cancer cell lines	$5.23 \times 10^{-6}$	<i>BMP7, CDH1, FABP5, FN1, MMP1</i> (includes <i>EG:4312</i> ), <i>NCOA3, VIM</i>	7
Cellular movement	Invasion	Invasion of colon cancer cell lines	$1.50 \times 10^{-4}$	<i>ANXA1, EGFR, NUAK1, TFF1, TFF3</i>	5
Cellular movement	Invasion	Invasion of epithelial cell lines	$1.67 \times 10^{-4}$	<i>AREG, CDH1, EGFR, FSCN1</i>	4
Cellular movement	Invasion	Invasion of carcinoma cell lines	$2.76 \times 10^{-4}$	<i>AKT3, DNAJB4, TGFB1, VIM, WNT5A</i>	5
Cellular movement	Invasion	Invasion of breast cell lines	$3.94 \times 10^{-4}$	<i>EGFR, FXYD5, TGFB1</i>	3
Cellular movement	Invasion	Invasion of lung cancer cell lines	$1.72 \times 10^{-3}$	<i>AKT3, AXL, DNAJB4, TGFB1</i>	4
Cellular movement	Invasion	Invasion of hepatoma cell lines	$2.28 \times 10^{-3}$	<i>MMP1</i> (includes <i>EG:4312</i> ), <i>TFPI2, TGFB1</i>	3
Cellular movement	Invasion	Invasion of breast cancer cell lines	$3.88 \times 10^{-3}$	<i>CDH1, ESR1, FN1, FXYD5, LOX, MMP1</i> (includes <i>EG:4312</i> ), <i>SPARC</i>	7
Cellular movement	Invasion	Invasion of melanoma cells	$7.45 \times 10^{-3}$	<i>CDH1, MCAM</i>	2
Cellular movement	Invasion	Invasion of bone cancer cell lines	$1.03 \times 10^{-2}$	<i>DKK3, NOV</i>	2
Cellular movement	Invasion	Invasion of thyroid tumor cell lines	$1.03 \times 10^{-2}$	<i>VIM, WNT5A</i>	2
Cellular movement	Movement	Movement of cells	$1.56 \times 10^{-9}$	<i>AKT3, ANXA1, AREG, AXL, BDNF, CDH1, CDH2, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, CYR61, EGFR, FN1, FYN, GJA1, ICAM1, ICAM2, ID2, IGFBP3, IGFBP5, IGFBP6, IL18, LAMB1, LOX, MGP, MSX2, NCOA3, NOV, PTPRK, RASGRP1, RET, RLN2, S100P, SERPINA3, SERPINE1, STC1, TFF3, TGFB1, TGM2, TNFRSF6B, WNT5A</i>	43
Cellular movement	Movement	Movement of eukaryotic cells	$1.13 \times 10^{-8}$	<i>AKT3, ANXA1, AXL, BDNF, CDH1, CDH2, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, CYR61, EGFR, FN1, FYN, GJA1, ICAM1, ICAM2, IGFBP3, IGFBP5, IGFBP6, IL18, LOX, MGP, MSX2, NCOA3, NOV, RASGRP1, RET, RLN2, S100P, SERPINA3, SERPINE1, STC1, TFF3, TGFB1, TGM2, TNFRSF6B, WNT5A</i>	39

Cellular movement	Movement	Movement of cell lines	$1.79 \times 10^{-5}$	<i>AKT3, CDH1, CDH2, CDKN2A, CXCL12, EGFR, FN1, FYN, GJA1, ICAM1, IGFBP6, LOX, MSX2, NCOA3, NOV, RET, RLN2, SERPINE1, TFF3, TGFB1, TNFRSF6B, WNT5A</i>	22
Cellular movement	Movement	Movement of tumor cell lines	$2.19 \times 10^{-5}$	<i>AKT3, CDH1, CDH2, CDKN2A, CXCL12, EGFR, FN1, FYN, GJA1, IGFBP6, MSX2, NCOA3, NOV, RET, RLN2, SERPINE1, TGFB1, WNT5A</i>	18
Cellular movement	Movement	Movement of neuroblastoma cell lines	$2.29 \times 10^{-4}$	<i>CXCL12, EGFR, RET</i>	3
Cellular movement	Movement	Movement of rhabdomyosarcoma cell lines	$5.28 \times 10^{-4}$	<i>CXCL12, IGFBP6</i>	2
Cellular movement	Movement	Movement of kidney cell lines	$9.99 \times 10^{-3}$	<i>FN1, ICAM1, RET, TFF3</i>	4
Cellular movement	Migration	Migration of cells	$3.34 \times 10^{-9}$	<i>AKT3, ANXA1, AREG, AXL, BDNF, CDH1, CDH2, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, CYR61, EGFR, FN1, FYN, GJA1, ICAM1, ICAM2, ID2, IGFBP3, IGFBP5, IGFBP6, IL18, LAMB1, LOX, MGP, MSX2, NCOA3, NOV, PTPRK, RASGRP1, RET, RLN2, S100P, SERPINA3, SERPINE1, STC1, TGFB1, TGM2, TNFRSF6B, WNT5A</i>	42
Cellular movement	Migration	Migration of eukaryotic cells	$2.40 \times 10^{-8}$	<i>AKT3, ANXA1, AXL, BDNF, CDH1, CDH2, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, CYR61, EGFR, FN1, FYN, GJA1, ICAM1, ICAM2, IGFBP3, IGFBP5, IGFBP6, IL18, LOX, MGP, MSX2, NCOA3, NOV, RASGRP1, RET, RLN2, S100P, SERPINA3, SERPINE1, STC1, TGFB1, TGM2, TNFRSF6B, WNT5A</i>	38
Cellular movement	Migration	Migration of normal cells	$1.30 \times 10^{-7}$	<i>ANXA1, AXL, BDNF, CDH1, CDH2, COL4A1, COL4A2, CTGF, CXCL12, CYR61, EGFR, FN1, ICAM1, ICAM2, IGFBP3, IGFBP5, IL18, MGP, RASGRP1, RLN2, S100P, SERPINA3, SERPINE1, STC1, TGFB1, TGM2, TNFRSF6B</i>	27
Cellular movement	Migration	Migration of endothelial cells	$2.54 \times 10^{-7}$	<i>AXL, COL4A1, COL4A2, CXCL12, CYR61, FN1, ICAM1, IGFBP3, MGP, S100P, SERPINE1, STC1, TGFB1</i>	13
Cellular movement	Migration	Migration of cell lines	$4.25 \times 10^{-5}$	<i>AKT3, CDH1, CDH2, CDKN2A, CXCL12, EGFR, FN1, FYN, GJA1, ICAM1, IGFBP6, LOX, MSX2, NCOA3, NOV, RET, RLN2, SERPINE1, TGFB1, TNFRSF6B, WNT5A</i>	21
Cellular movement	Migration	Migration of tumor cell lines	$6.22 \times 10^{-5}$	<i>AKT3, CDH1, CDH2, CDKN2A, CXCL12, EGFR, FN1, FYN, GJA1, IGFBP6, MSX2, NCOA3, NOV, RLN2, SERPINE1, TGFB1, WNT5A</i>	17
Cellular movement	Migration	Migration of myeloid cells	$6.84 \times 10^{-5}$	<i>ANXA1, CXCL12, FN1, ICAM1, SERPINE1, TGFB1, TGM2</i>	7
Cellular movement	Migration	Migration of neutrophils	$3.97 \times 10^{-4}$	<i>ANXA1, FN1, ICAM1, SERPINE1, TGFB1</i>	5
Cellular movement	Migration	Migration of granulocytes	$4.78 \times 10^{-4}$	<i>ANXA1, CXCL12, FN1, ICAM1, SERPINE1, TGFB1</i>	6

Cellular movement	Migration	Lymphocyte migration	$6.53 \times 10^{-4}$	<i>CXCL12, EGFR, FN1, ICAM1, ICAM2, IL18, RASGRP1, TGM2, TNFRSF6B</i>	9
Cellular movement	Migration	Migration of mononuclear leukocytes	$8.93 \times 10^{-4}$	<i>CXCL12, EGFR, FN1, ICAM1, ICAM2, IL18, RASGRP1, TGFB1, TGM2, TNFRSF6B</i>	10
Cellular movement	Migration	Migration of breast cancer cell lines	$1.54 \times 10^{-3}$	<i>CDH2, CXCL12, EGFR, FN1, GJA1, RLN2, SERPINE1</i>	7
Cellular movement	Migration	Migration of leukocytes	$1.64 \times 10^{-3}$	<i>ANXA1, CXCL12, EGFR, FN1, ICAM1, ICAM2, IL18, RASGRP1, RLN2, SERPINA3, SERPINE1, TGFB1, TGM2, TNFRSF6B</i>	14
Cellular movement	Migration	Migration of bone cancer cell lines	$1.74 \times 10^{-3}$	<i>FN1, FYN, NOV</i>	3
Cellular movement	Migration	Migration of lung cancer cell lines	$2.28 \times 10^{-3}$	<i>AKT3, CDKN2A, TGFB1</i>	3
Cellular movement	Migration	Migration of carcinoma cell lines	$2.91 \times 10^{-3}$	<i>AKT3, TGFB1, WNT5A</i>	3
Cellular movement	Migration	Migration of breast cell lines	$3.64 \times 10^{-3}$	<i>EGFR, LOX, TGFB1</i>	3
Cellular movement	Migration	Migration of prostate cancer cell lines	$7.40 \times 10^{-3}$	<i>CDH1, CXCL12, FN1, NCOA3</i>	4
Cellular movement	Cell movement	Cell movement of cell lines	$1.68 \times 10^{-8}$	<i>BMP7, CCR10, CD24, CDH2, CLDN3, CXCL12, DKK3, DNAJB4, EGFR, ESR1, FN1, FOSL1, FSCN1, KRT19, NRCAM, RET, RLN2, SERPINE1, SPARC, TFF3, TGFB1, WNT5A</i>	22
Cellular movement	Cell movement	Cell movement of tumor cell lines	$1.95 \times 10^{-7}$	<i>BMP7, CD24, CDH2, CLDN3, CXCL12, DKK3, DNAJB4, EGFR, ESR1, FN1, FOSL1, KRT19, RLN2, SERPINE1, SPARC, TGFB1, WNT5A</i>	17
Cellular movement	Cell movement	Cell movement of eukaryotic cells	$5.03 \times 10^{-7}$	<i>ANXA1, BDNF, BMP7, CCR10, CD24, CDH2, CLDN3, CXCL12, DKK3, DNAJB4, EGFR, ESR1, FN1, FOSL1, FSCN1, ICAM1, KRT19, NRCAM, RET, RLN2, SERPINA3, SERPINE1, SPARC, TFF3, TGFB1, TNFRSF6B, WNT5A</i>	27
Cellular movement	Cell movement	Cell movement	$5.31 \times 10^{-7}$	<i>ANXA1, BDNF, BMP7, CALD1, CCR10, CD24, CDH2, CLDN3, CXCL12, CYR61, DKK3, DNAJB4, EGFR, ESR1, FN1, FOSL1, FSCN1, ICAM1, KRT19, MSN, NRCAM, RET, RLN2, SERPINA3, SERPINE1, SPARC, TFF3, TGFB1, TNFRSF6B, VIM, WNT5A</i>	31
Cellular movement	Cell movement	Cell movement of lung cancer cell lines	$3.94 \times 10^{-4}$	<i>DNAJB4, FN1, FOSL1</i>	3

Cellular movement	Cell movement	Cell movement of breast cancer cell lines	$1.49 \times 10^{-3}$	<i>ESR1, KRT19, SERPINE1, SPARC, TGFB1</i>	5
Cellular movement	Cell movement	Cell movement of leukemia cells	$3.07 \times 10^{-3}$	<i>CXCL12, TGFB1</i>	2
Cellular movement	Cell movement	Cell movement of lung cell lines	$5.04 \times 10^{-3}$	<i>FOSL1, TFF3</i>	2
Cellular movement	Cell movement	Cell movement of pancreatic cancer cell lines	$5.04 \times 10^{-3}$	<i>CDH2, TGFB1</i>	2
Cellular movement	Cell movement	Cell movement of carcinoma cell lines	$1.35 \times 10^{-2}$	<i>DNAJB4, FOSL1</i>	2
Cellular movement	Scattering	Scattering of cell lines	$1.06 \times 10^{-5}$	<i>EGFR, FN1, MSX2, RET, TFF3</i>	5
Cellular movement	Scattering	Scattering of tumor cell lines	$3.94 \times 10^{-4}$	<i>EGFR, MSX2, RET</i>	3
Cellular movement	Scattering	Scattering of neuroblastoma cell lines	$5.28 \times 10^{-4}$	<i>EGFR, RET</i>	2
Cellular movement	Scattering	Scattering of kidney cell lines	$7.45 \times 10^{-3}$	<i>FN1, TFF3</i>	2
Cellular movement	Chemotaxis	Chemotaxis of granule cells	$5.28 \times 10^{-4}$	<i>BDNF, CXCL12</i>	2
Cellular movement	Chemotaxis	Chemotaxis of rhabdomyosarcoma cell lines	$1.56 \times 10^{-3}$	<i>CXCL12, FN1</i>	2
Cellular movement	Chemotaxis	Chemotaxis of microglia	$5.04 \times 10^{-3}$	<i>TGFB1, TNFRSF6B</i>	2
Cellular movement	Chemotaxis	Chemotaxis	$1.49 \times 10^{-2}$	<i>ANXA1, BDNF, CCR10, CXCL12, CYR61, EGFR, FN1, FOSL1, RLN2, SERPINA3, TFF3, TGFB1, TNFRSF6B</i>	13
Cellular movement	Locomotion	Locomotion of eukaryotic cells	$5.28 \times 10^{-4}$	<i>CXCL12, TGFB1</i>	2
Cellular movement	Adhesion	Adhesion of t lymphocytes	$2.12 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1</i>	5

Gastrointestinal disease	Colorectal cancer	Colorectal cancer	$5.18 \times 10^{-15}$	<i>AKR1C2, AKT3, ANK3, BEX1, BMP7, BST2, CA2, CALD1, CDH2, CDKN2A, CLDN3, CLGN, COL4A1, COL4A2, COL6A1, COL6A2, CRIP1, CTGF, CXCL12, CYP1B1, EGFR, EMP1, EPCAM, FBN2 (includes EG:2201), FN1, FSCN1, FYN, GDF15, GJA1, GLUL, GREB1, HIST1H2BD, HIST1H4H (includes EG:8365), ICAM1, ID2, IGFBP5, INSIG1, IRS1, MAFB, MCAM, MLPH, NUAQ1, RET, SERPINA3, SERPINE1, SERTAD2, SLC12A8, SLC16A3, SRPX, STXBP6, TFF3, TM4SF1, TPD52L1, TUBB2A</i>	54
Gastrointestinal disease	Pancreatic tumor	Pancreatic tumor	$3.40 \times 10^{-9}$	<i>AXL, CDKN2A, CREBBP, CYR61, EGFR, FN1, IGFBP3, IGFBP5, KLF4, KRT7, KRT19, MSLN, MSX2, PIK3R1, RET, SERPINE2, TFF1, TUBB2A</i>	18
Gastrointestinal disease	Digestive organ tumor	Digestive organ tumor	$3.56 \times 10^{-9}$	<i>ABCB1, AKT3, ANXA1, AXL, CA2, CDH1, CDKN2A, COL1A1, CREBBP, CYR61, EGFR, FN1, FSCN1, FYN, GDF15, GJA1, GSTP1, IGFBP3, IGFBP5, INSIG1, KLF4, KRT7, KRT19, MSLN, MSX2, NNMT, PIK3R1, RB1, RET, SERPINE2, TFF1, TM4SF1, TUBB2A, VIM, WWOX</i>	35
Gastrointestinal disease	Colon cancer	Colon cancer	$8.99 \times 10^{-6}$	<i>AKT3, BMP7, BST2, CA2, CALD1, CLDN3, COL6A1, COL6A2, CRIP1, EGFR, FN1, FSCN1, GDF15, GJA1, HIST1H2BD, HIST1H4H (includes EG:8365), INSIG1, MCAM, SERPINA3, SERPINE1, STXBP6, TFF3, TPD52L1, TUBB2A</i>	24
Gastrointestinal disease	Pancreatic adenocarcinoma	Pancreatic adenocarcinoma	$3.67 \times 10^{-5}$	<i>AXL, CYR61, IGFBP3, KRT7, KRT19, MSLN, SERPINE2</i>	7
Gastrointestinal disease	Pancreatic carcinoma	Pancreatic carcinoma	$4.17 \times 10^{-4}$	<i>AXL, CYR61, IGFBP3, KRT7, KRT19, MSLN, MSX2, SERPINE2</i>	8
Gastrointestinal disease	Acinar-cell carcinoma	Acinar-cell carcinoma	$1.21 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, PIK3R1</i>	4
Gastrointestinal disease	Esophageal carcinoma	Esophageal carcinoma	$1.21 \times 10^{-3}$	<i>EGFR, GSTP1, RB1, WWOX</i>	4
Gastrointestinal disease	Salivary gland tumor	Salivary gland tumor	$1.92 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, INSIG1, PIK3R1, RET</i>	6
Gastrointestinal disease	Mucoepidermoid carcinoma	Mucoepidermoid carcinoma	$2.94 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, INSIG1, PIK3R1</i>	5
Gastrointestinal disease	Esophageal cancer	Esophageal cancer	$5.28 \times 10^{-3}$	<i>ADA, EGFR, GSTP1, RB1, RET, TUBB2A, WWOX</i>	7
Gastrointestinal disease	Cholangiocarcinoma	Cholangiocarcinoma	$6.65 \times 10^{-3}$	<i>ANXA1, EGFR, TM4SF1, VIM</i>	4
Gastrointestinal disease	Colorectal tumor	Colorectal tumor	$9.49 \times 10^{-3}$	<i>AKT3, EGFR, FSCN1, GDF15, GJA1, INSIG1, RET, TUBB2A</i>	8

Cellular development	Developmental process	Developmental process of tumor cell lines	$3.60 \times 10^{-11}$	<i>ABCB1, AKT3, ANXA1, BMP7, CDH1, CDKN2A, CREBBP, CTGF, CXADR, CYR61, DKK3, DNAJB4, EGFR, EIF5A, ESR1, FOSL1, GDF15, GJA1, HMGA1, HMGA2, ID2, IFI16, IGFBP3, IGFBP5, IRS1, KLF4, MSX2, MUC1, MYB (includes EG:4602), MYL9 (includes EG:10398), NCOA3, NOV, PDCD10, PIK3R1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, SNCA, TFAP2C, TGFB1, XBP1</i>	43
Cellular development	Developmental process	Developmental process of epithelial cells	$5.97 \times 10^{-7}$	<i>ANXA1, AREG, BMP7, CDH1, COL4A1, CREBBP, EGFR, FHL2, FN1, ID2, RB1, TGFB1</i>	12
Cellular development	Developmental process	Developmental process of epidermal cells	$1.76 \times 10^{-4}$	<i>ANXA1, CDH1, EGFR, FHL2, FN1, ID2, TGFB1</i>	7
Cellular development	Developmental process	Developmental process of fibroblast cell lines	$3.35 \times 10^{-4}$	<i>BMP7, EGFR, FN1, IGFBP3, IRS1, MGP, NRCAM, RET, TGFB1</i>	9
Cellular development	Developmental process	Developmental process of keratinocytes	$4.78 \times 10^{-4}$	<i>ANXA1, CDH1, EGFR, FN1, ID2, TGFB1</i>	6
Cellular development	Developmental process	Developmental process of cancer cells	$4.95 \times 10^{-4}$	<i>CDKN2A, GFRA1, MCAM, MUC1, PEG10, RB1, TFF3, TGFB1</i>	8
Cellular development	Developmental process	Developmental process of tumor cells	$5.67 \times 10^{-4}$	<i>CDKN2A, GFRA1, HMGA2, MCAM, MUC1, PEG10, RB1, TFF3, TGFB1</i>	9
Cellular development	Developmental process	Developmental process of kidney cell lines	$1.31 \times 10^{-3}$	<i>BMP7, CALCR, ESR1, OXTR, TGFB1</i>	5
Cellular development	Developmental process	Developmental process of endothelial cells	$1.44 \times 10^{-3}$	<i>AXL, FN1, IGFBP3, MGP, STC1, TGFB1</i>	6
Cellular development	Developmental process	Developmental process of carcinoma cell lines	$1.54 \times 10^{-3}$	<i>AKT3, ANXA1, DNAJB4, IGFBP3, NOV, PIK3R1, TGFB1</i>	7
Cellular development	Developmental process	Developmental process of mononuclear leukocytes	$2.78 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, GFRA1, IFI16, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	11

Cellular development	Developmental process	Developmental process of lung cancer cell lines	$3.74 \times 10^{-3}$	<i>AKT3, ANXA1, DNAJB4, IGFBP3, PIK3R1, TGFB1</i>	6
Cellular development	Developmental process	Developmental process of prostate cancer cell lines	$3.74 \times 10^{-3}$	<i>BMP7, CXADR, IFI16, IGFBP5, PDCD10, TGFB1</i>	6
Cellular development	Developmental process	Developmental process of myeloid leukemia cells	$5.04 \times 10^{-3}$	<i>GFRA1, MUC1</i>	2
Cellular development	Developmental process	Developmental process of thymocytes	$5.04 \times 10^{-3}$	<i>CDKN2A, IL7R</i>	2
Cellular development	Developmental process	Developmental process of epithelial cell lines	$6.65 \times 10^{-3}$	<i>CALCR, ESR1, ID2, TGFB1</i>	4
Cellular development	Developmental process	Developmental process of blood cells	$7.17 \times 10^{-3}$	<i>CDKN2A, CXCL12, EGFR, GATA3, GFRA1, IFI16, IL18, IL7R, MAFB, MUC1, MYB (includes EG:4602), RAC2, TGFB1, TNFRSF6B</i>	14
Cellular development	Developmental process	Developmental process of bone cancer cell lines	$8.90 \times 10^{-3}$	<i>NOV, PLAGL1, SNCA</i>	3
Cellular development	Developmental process	Developmental process of fibroblasts	$1.03 \times 10^{-2}$	<i>BMP7, CDKN2A, TGFB1</i>	3
Cellular development	Developmental process	Developmental process of muscle cells	$1.68 \times 10^{-2}$	<i>IGFBP3, IGFBP5, RB1, TGFB1</i>	4
Cellular development	Growth	Growth of tumor cell lines	$1.55 \times 10^{-10}$	<i>ABCB1, AKT3, ANXA1, CDH1, CDKN2A, CTGF, CXADR, CYR61, DKK3, DNAJB4, EGFR, EIF5A, ESR1, FOSL1, GDF15, GJA1, HMGA1, HMGA2, IFI16, IGFBP3, IGFBP5, IRS1, KLF4, MSX2, MYL9 (includes EG:10398), NCOA3, NOV, PDCD10, PIK3R1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, TFAP2C, TGFB1, XBP1</i>	37
Cellular development	Growth	Growth of breast cancer cell lines	$3.81 \times 10^{-6}$	<i>CDH1, CYR61, EGFR, ESR1, GJA1, HMGA1, IGFBP3, IGFBP5, IRS1, NCOA3, TFAP2C, TGFB1, XBP1</i>	13
Cellular development	Growth	Growth of neuroblastoma cell lines	$2.29 \times 10^{-4}$	<i>EGFR, HMGA2, IGFBP5, RET</i>	4

Cellular development	Growth	Growth of epithelial cells	$8.74 \times 10^{-4}$	<i>AREG, EGFR, FHL2, ID2, RB1</i>	5
Cellular development	Growth	Growth of cancer cells	$1.20 \times 10^{-3}$	<i>CDKN2A, GFRA1, MCAM, PEG10, RB1, TFF3, TGFB1</i>	7
Cellular development	Growth	Growth of tumor cells	$1.34 \times 10^{-3}$	<i>CDKN2A, GFRA1, HMGA2, MCAM, PEG10, RB1, TFF3, TGFB1</i>	8
Cellular development	Growth	Growth of fibroblast cell lines	$1.66 \times 10^{-3}$	<i>EGFR, FN1, IGFBP3, IRS1, NRCAM, RET, TGFB1</i>	7
Cellular development	Growth	Growth of epidermal cells	$5.41 \times 10^{-3}$	<i>EGFR, FHL2, ID2</i>	3
Cellular development	Growth	Growth of carcinoma cell lines	$6.19 \times 10^{-3}$	<i>AKT3, ANXA1, DNAJB4, IGFBP3, NOV, PIK3R1</i>	6
Cellular development	Growth	Growth of endometrial cancer cell lines	$7.45 \times 10^{-3}$	<i>CYR61, ESR1</i>	2
Cellular development	Growth	Growth of squamous cell carcinoma cell lines	$1.03 \times 10^{-2}$	<i>CDKN2A, EGFR</i>	2
Cellular development	Growth	Growth of prostate cancer cell lines	$1.14 \times 10^{-2}$	<i>CXADR, IFI16, IGFBP5, PDCD10, TGFB1</i>	5
Cellular development	Growth	Growth of lung cancer cell lines	$1.48 \times 10^{-2}$	<i>AKT3, ANXA1, DNAJB4, IGFBP3, PIK3R1</i>	5
Cellular development	Growth	Growth of pancreatic cancer cell lines	$1.52 \times 10^{-2}$	<i>IGFBP3, MSX2, NCOA3</i>	3
Cellular development	Differentiation	Differentiation of cells	$6.22 \times 10^{-6}$	<i>ANXA1, AREG, BMP7, CDH1, CDKN2A, COL4A1, CREBBP, CTGF, CXCL12, FN1, GATA3, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, KLF4, MAFB, MGP, MUC1, MYB (includes EG:4602), PIK3R1, PRAME (includes EG:23532), RB1, SNCA, STC1, TGFB1</i>	28
Cellular development	Differentiation	Differentiation of cell lines	$1.61 \times 10^{-4}$	<i>BMP7, CREBBP, CTGF, FN1, ID2, IGFBP5, IGFBP6, MGP, MUC1, MYB (includes EG:4602), PIK3R1, PRAME (includes EG:23532), RB1, SNCA, TGFB1</i>	15
Cellular development	Differentiation	Differentiation of T lymphocytes	$2.81 \times 10^{-4}$	<i>CDKN2A, CXCL12, GATA3, IL18, MUC1, TGFB1</i>	6
Cellular development	Differentiation	Differentiation of epithelial cells	$1.18 \times 10^{-3}$	<i>ANXA1, CDH1, COL4A1, CREBBP, FN1, TGFB1</i>	6

Cellular development	Differentiation	Differentiation of tumor cell lines	$2.99 \times 10^{-3}$	<i>CREBBP, CTGF, IGFBP5, MUC1, MYB</i> (includes EG:4602), <i>PIK3R1, PRAME</i> (includes EG:23532), <i>RB1, SNCA, TGFB1</i>	10
Cellular development	Differentiation	Differentiation of mononuclear leukocytes	$4.13 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IFI16, IL18, MUC1, TGFB1</i>	7
Cellular development	Differentiation	Differentiation of th2 cells	$5.04 \times 10^{-3}$	<i>GATA3, TGFB1</i>	2
Cellular development	Differentiation	Differentiation of keratinocytes	$6.65 \times 10^{-3}$	<i>ANXA1, CDH1, FN1, TGFB1</i>	4
Cellular development	Differentiation	Differentiation of chondrocytes	$1.03 \times 10^{-2}$	<i>STC1, TGFB1</i>	2
Cellular development	Differentiation	Differentiation of leukemia cell lines	$1.28 \times 10^{-2}$	<i>CREBBP, MUC1, MYB</i> (includes EG:4602), <i>PIK3R1, RB1, TGFB1</i>	6
Cellular development	Differentiation	Differentiation of muscle cells	$1.34 \times 10^{-2}$	<i>IGFBP3, RB1, TGFB1</i>	3
Cellular development	Differentiation	Differentiation of fibroblast cell lines	$1.52 \times 10^{-2}$	<i>BMP7, MGP, TGFB1</i>	3
Cellular development	Differentiation	Differentiation of blood cells	$1.69 \times 10^{-2}$	<i>CDKN2A, CXCL12, GATA3, IFI16, IL18, MAFB, MUC1, MYB</i> (includes EG:4602), <i>TGFB1</i>	9
Cellular development	Development	Development of cells	$4.69 \times 10^{-4}$	<i>BDNF, BMP7, CDH1, CDKN2A, CREBBP, CXCL12, CYR61, EGFR, FN1, GATA3, ID2, IL18, IL7R, MAP7, MUC1, RAC2, RRAS, STC1, TGFB1, TNFRSF6B</i>	20
Cellular development	Development	T cell development	$1.70 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	9
Cellular development	Development	Development of blood cells	$2.13 \times 10^{-3}$	<i>CDKN2A, CXCL12, EGFR, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	10
Cellular development	Epithelial-mesenchymal transition	Epithelial-mesenchymal transition of fibroblasts	$5.28 \times 10^{-4}$	<i>BMP7, TGFB1</i>	2
Cellular development	Epithelial-mesenchymal transition	Epithelial-mesenchymal transition of hepatocytes	$5.28 \times 10^{-4}$	<i>BMP7, TGFB1</i>	2
Cellular development	Epithelial-mesenchymal transition	Epithelial-mesenchymal transition of kidney cell lines	$3.07 \times 10^{-3}$	<i>BMP7, TGFB1</i>	2

Cellular development	Transdifferentiation	Transdifferentiation of epithelial cells	$1.56 \times 10^{-3}$	COL4A1, TGFB1	2
Cellular development	Transdifferentiation	Transdifferentiation of mesenchymal cells	$1.56 \times 10^{-3}$	COL4A1, TGFB1	2
Cellular development	Apoptosis	Apoptosis of T lymphocytes	$2.71 \times 10^{-3}$	CDKN2A, CXCL12, IL7R, RAC2, TGFB1, TNFRSF6B	6
Cellular development	Induction	Induction of T lymphocytes	$3.07 \times 10^{-3}$	IL18, MUC1	2
Cellular development	Tubulation	Tubulation of endothelial cells	$5.41 \times 10^{-3}$	AXL, IGFBP3, MGP	3
Cellular development	Shape change	Shape change of fibroblasts	$7.45 \times 10^{-3}$	CDKN2A, FN1	2
Cellular development	Activation-induced cell death	Activation-induced cell death of T lymphocytes	$1.35 \times 10^{-2}$	RAC2, TGFB1	2
Genetic disorder	Pancreatic tumor	Pancreatic tumor	$3.40 \times 10^{-9}$	AXL, CDKN2A, CREBBP, CYR61, EGFR, FN1, IGFBP3, IGFBP5, KLF4, KRT7, KRT19, MSLN, MSX2, PIK3R1, RET, SERPINE2, TFF1, TUBB2A	18
Genetic disorder	Pancreatic cancer	Pancreatic cancer	$6.91 \times 10^{-8}$	AXL, CDH2, CDKN2A, CREBBP, CYR61, EGFR, FBN2 (includes EG:2201), FN1, FYN, IGFBP3, IGFBP5, KLF4, KRT7, KRT19, MSLN, MSX2, PIK3R1, RET, SERPINE2, TFF1, TUBB2A	21
Genetic disorder	Non-small cell lung cancer	Non-small cell lung cancer	$2.45 \times 10^{-6}$	AKT3, B2M, CDH1, CDKN2A, DNAJB4, EGFR, EPCAM, FN1, FYN, MAFB, MSLN, RB1, RET, S100P, TUBB2A	15
Genetic disorder	Prostate cancer	Prostate cancer	$6.19 \times 10^{-6}$	ABAT, AKT3, CDH1, COL1A1, CYP1B1, DNAJC15, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, IGFBP3, IL7R, KRT7, MMP1 (includes EG:4312), MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, TFF3, TUBB2A, WWOX	27
Genetic disorder	Alzheimer disease	Alzheimer disease	$7.95 \times 10^{-6}$	ABAT, AKAP2, ANK3, BDNF, BIN1, CDC42EP3, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, DNAJC15, EML1 (includes EG:2009), ESR1, EXT1, GATA3, GREB1, GRHL2, HMGA1, ICAM1, IGFBP3, IGFBP6, LEPREL1, LPHN2, MAP1B, MMP1 (includes EG:4312), NEFH, PLTP, RAB3B, RNASET2, SCD, SELENBP1, SERPINA3, SERPINE2, SLC12A8, SNCA, SPARC, STXBP6, TGFB1, TGM2, TUBB2A, UBB, UCHL1, WWOX	44
Genetic disorder	Colon cancer	Colon cancer	$8.99 \times 10^{-6}$	AKT3, BMP7, BST2, CA2, CALD1, CLDN3, COL6A1, COL6A2, CRIP1, EGFR, FN1, FSCN1, GDF15, GJA1, HIST1H2BD, HIST1H4H (includes EG:8365), INSIG1, MCAM, SERPINA3, SERPINE1, STXBP6, TFF3, TPD52L1, TUBB2A	24

Genetic disorder	Prostatic intraepithelial neoplasia	Prostatic intraepithelial neoplasia	$2.72 \times 10^{-5}$	<i>ESR1, FHL2, GATA3, GPX3, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	10
Genetic disorder	Genetic disorder	Genetic disorder	$2.73 \times 10^{-5}$	<i>ABAT, ABCB1, ADA, AGA, AKAP2, AKAP12, AKR1B1, AKR1C2, AKT3, AMMECR1, ANK3, APPBP2, ATXN1, AXL, B2M, BCAS3, BCAT1, BDNF, BIN1, BMP7, BRIP1, BST2, C6ORF97, CA2, CALCR, CALD1, CD24, CDA, CDC42EP3, CDH1, CDH2, CDKN2A, CDS1, CELSR2, CHST6, CLDN3, COCH, COL1A1, COL21A1, COL4A1, COL4A2, COL6A1, COL6A2, CREBBP, CRIP1, CRYAB, CTGF, CXCL12, CYP1B1, CYR61, DFNA5, DKK3, DNAJB4, DNAJC15, ECM1, EFEMP2, EGFR, EGR3, EML1 (includes EG:2009), ENOSF1, EPCAM, ESR1, EXT1, FBN2 (includes EG:2201), FHL2, FN1, FNDC3B, FSCN1, FYN, GATA3, GDF15, GFRA1, GJA1, GNA14, GNAL, GPX3, GREB1, GRHL2, HEG1, HIST1H2BD, HIST1H4H (includes EG:8365), HIST2H2AA3, HMGA1, HMGA2, HNMT, ICAM1, ID4, IGF2BP2, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, INSIG1, IRS1, ISOC1, KIAA1324, KLF4, KRT7, KRT19, KYNU, LAMB1, LDHB, LEPREL1, LOX, LPCAT1, LPHN2, LXN, MAFB, MAP1B, MCAM, MLLT11, MLPH, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MSLN, MSMB, MSX2, MT1E, MTUS1, MUC1, MYL9 (includes EG:10398), NCOA3, NDN, NEBL, NEFH, NRCAM, NSMAF, OLFM1, ORC5L, PBX1, PDGFC, PDLIM4, PIK3R1, PIK3R3, PLAGL1, PLTP, PSAT1, PSMB9, PTRF, RAB3B, RAC2, RAI14, RAMP3, RASGRP1, RB1, RBM47, RBPMS, RCN1, RET, RNASET2, S100P, SCD, SCHIP1, SCUBE2, SDC2, SELENBP1, SEMA3C, SERPINA3, SERPINB7, SERPINE1, SERPINE2, SGCE, SH3YL1, SIDT1, SLC12A2, SLC12A8, SLC19A2, SLC24A3, SLC27A6, SLC6A14, SNCA, SNRPN, SOX3, SPARC, SRPX, STXBPA6, TACSTD2, TFF1, TFF3, TFPI2, TGFB1, TGFB2, TGM2, TMF1, TNFRSF6B, TPD52L1, TPM2, TUBB2A, TUBB2B, UBB, UCHL1, UGT2B15, VAV3, VIM, WWOX, XBP1, ZNF395</i>	198
Genetic disorder	Pancreatic adenocarcinoma	Pancreatic adenocarcinoma	$3.67 \times 10^{-5}$	<i>AXL, CYR61, IGFBP3, KRT7, KRT19, MSLN, SERPINE2</i>	7
Genetic disorder	Non-small-cell lung carcinoma	Non-small-cell lung carcinoma	$4.92 \times 10^{-5}$	<i>AKT3, B2M, CDKN2A, EGFR, EPCAM, FN1, FYN, MAFB, MSLN, RB1, RET, TUBB2A</i>	12
Genetic disorder	Prostatic carcinoma	Prostatic carcinoma	$5.27 \times 10^{-5}$	<i>ABAT, AKT3, EGFR, EPCAM, ESR1, FHL2, FYN, GATA3, GDF15, GPX3, IGFBP3, KRT7, MSMB, MUC1, MYL9 (includes EG:10398), PSAT1, RB1, RET, TFF3, TUBB2A</i>	20
Genetic disorder	Prostatic intraepithelial tumor	Prostatic intraepithelial tumor	$8.92 \times 10^{-5}$	<i>FHL2, GATA3, GPX3, IGFBP3, KRT7, MUC1, MYL9 (includes EG:10398), PSAT1, TFF3</i>	9

Genetic disorder	Lung carcinoma	Lung carcinoma	$9.52 \times 10^{-5}$	<i>ABCB1, AKT3, B2M, CDKN2A, CLDN3, EGFR, EPCAM, FN1, FYN, LOX, MAFB, MSLN, RB1, RET, TUBB2A</i>	15
Genetic disorder	Pancreatic carcinoma	Pancreatic carcinoma	$4.17 \times 10^{-4}$	<i>AXL, CYR61, IGFBP3, KRT7, KRT19, MSLN, MSX2, SERPINE2</i>	8
Genetic disorder	Osteoporosis	Osteoporosis	$6.49 \times 10^{-4}$	<i>CA2, CALCR, COL1A1, ESR1, PDLIM4</i>	5
Genetic disorder	Lung cancer	Lung cancer	$8.27 \times 10^{-4}$	<i>ABCB1, AKT3, B2M, CDH1, CDKN2A, CLDN3, DNAJB4, EGFR, EPCAM, FN1, FYN, LOX, MAFB, MSLN, RB1, RET, S100P, TUBB2A</i>	18
Genetic disorder	Light chain associated amyloidosis	Light chain-associated amyloidosis	$9.96 \times 10^{-4}$	<i>CXCL12, IGFBP5, RB1, TGFB1</i>	4
Genetic disorder	Dupuytren contracture	Dupuytren contracture	$1.20 \times 10^{-3}$	<i>COL1A1, COL21A1, COL4A1, COL4A2, COL6A1, COL6A2, MMP1 (includes EG:4312)</i>	7
Genetic disorder	Acinar-cell carcinoma	Acinar-cell carcinoma	$1.21 \times 10^{-3}$	<i>CREBBP, FN1, IGFBP5, PIK3R1</i>	4
Genetic disorder	Serous ovarian carcinoma process	Serous ovarian carcinoma process	$1.28 \times 10^{-3}$	<i>CLDN3, MSLN, MUC1</i>	3
Genetic disorder	Bethlem myopathy	Bethlem myopathy	$1.56 \times 10^{-3}$	<i>COL6A1, COL6A2</i>	2
Genetic disorder	Cutis laxa, recessive type 1	Cutis laxa, recessive type 1	$1.56 \times 10^{-3}$	<i>EFEMP2, LOX</i>	2
Genetic disorder	Ullrich congenital muscular dystrophy	Ullrich congenital muscular dystrophy	$1.56 \times 10^{-3}$	<i>COL6A1, COL6A2</i>	2
Genetic disorder	Nonsyndromic hearing impairment	Nonsyndromic hearing impairment	$2.28 \times 10^{-3}$	<i>COCH, DFNA5, GRHL2</i>	3
Genetic disorder	Gelatinous drop-like corneal dystrophy	Gelatinous drop-like corneal dystrophy	$3.07 \times 10^{-3}$	<i>TACSTD2, TGFB1</i>	2
Genetic disorder	Osteoarthritis	Osteoarthritis	$6.62 \times 10^{-3}$	<i>CRYAB, EFEMP2, IL18, MMP1 (includes EG:4312), TFPI2, TGFB1</i>	6
Genetic disorder	Congenital central hypoventilation syndrome	Congenital central hypoventilation syndrome	$7.45 \times 10^{-3}$	<i>BDNF, RET</i>	2

Genetic disorder	Progressive supranuclear palsy	Progressive supranuclear palsy	$9.07 \times 10^{-3}$	<i>ABAT, SERPINA3, TGM2, UBB</i>	4
Genetic disorder	Postmenopausal osteoporosis	Postmenopausal osteoporosis	$1.35 \times 10^{-2}$	<i>CALCR, ESR1</i>	2
Cell death	Cell death	Cell death of eukaryotic cells	$1.33 \times 10^{-8}$	<i>ABCB1, AKT3, ANKRD1, ANXA1, ATMIN, B2M, BDNF, BMP7, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), COL4A2, CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, EMP1, EMP3, ESR1, FHL2, FN1, GDF15, GPX1, HMGA2, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, LGALS3BP, MSN, MUC1, MYB (includes EG:4602), NCOA3, NUA1, PDZK1, PLAGL1, PRAME (includes EG:23532), RAC2, RB1, RET, S100P, SDC2, SNCA, SPARC, SRPX, TFF3, TGFB1, TGM2, TNFRSF6B, WWOX, XBP1</i>	60
Cell death	Cell death	Cell death of cell lines	$2.32 \times 10^{-8}$	<i>ABCB1, AKT3, ANKRD1, ATMIN, B2M, BDNF, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, EMP1, EMP3, ESR1, FHL2, FN1, GDF15, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, LGALS3BP, MSN, MUC1, MYB (includes EG:4602), NCOA3, NUA1, PDZK1, PLAGL1, PRAME (includes EG:23532), RB1, RET, S100P, SDC2, SNCA, SPARC, SRPX, TFF3, TGFB1, TGM2, TNFRSF6B, WWOX, XBP1</i>	53
Cell death	Cell death	Cell death of tumor cell lines	$3.22 \times 10^{-8}$	<i>ABCB1, AKT3, ANKRD1, ATMIN, B2M, BDNF, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, ESR1, FN1, GDF15, IFI16, IGFBP3, IGFBP5, IGFBP6, LGALS3BP, MSN, MUC1, MYB (includes EG:4602), NCOA3, NUA1, PDZK1, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, SNCA, SPARC, SRPX, TFF3, TGFB1, TGM2, TNFRSF6B, WWOX, XBP1</i>	47
Cell death	Cell death	Cell death	$1.20 \times 10^{-7}$	<i>ABCB1, AKT3, ANKRD1, ANXA1, ATMIN, B2M, BDNF, BMP7, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), COL4A2, CREBBP, CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, EIF5A, EMP1, EMP3, ESR1, FHL2, FN1, GDF15, GPX1, GSTP1, HMGA2, ICAM2, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, LGALS3BP, MSN, MUC1, MYB (includes EG:4602), NCOA3, NUA1, PDZK1, PLAGL1, PRAME (includes EG:23532), RAC2, RB1, RET, S100P, SDC2, SNCA, SPARC, SRPX, TFF1, TFF3, TGFB1, TGM2, TNFRSF6B, TPD52L1, WWOX, XBP1, ZNF443</i>	67
Cell death	Cell death	Cell death of breast cancer cell lines	$1.18 \times 10^{-4}$	<i>B2M, CDH1, CTGF, CYR61, DNAJC15, DUSP4, EGFR, ESR1, FN1, IGFBP3, IGFBP5, MUC1, NCOA3, TGFB1, XBP1</i>	15
Cell death	Cell death	Cell death of bone cancer cell lines	$9.31 \times 10^{-4}$	<i>ATMIN, CDH1, CDKN2A, DKK3, IGFBP5, PLAGL1, SDC2</i>	7

Cell death	Cell death	Cell death of normal cells	$1.23 \times 10^{-3}$	<i>ANXA1, BMP7, CDH1, CDH2, CDKN2A, COL4A2, CRYAB, CTGF, CXCL12, EGFR, FN1, GPX1, IL18, IL7R, RAC2, RB1, SNCA, TGFB1, TNFRSF6B</i>	19
Cell death	Cell death	Cell death of neuroblastoma cell lines	$1.28 \times 10^{-2}$	<i>BDNF, IGFBP3, IGFBP5, RET, SNCA, TGFB1</i>	6
Cell death	Apoptosis	Apoptosis of tumor cell lines	$1.31 \times 10^{-7}$	<i>AKT3, ANKRD1, ATMIN, B2M, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, ESR1, FN1, GDF15, IFI16, IGFBP3, IGFBP5, IGFBP6, LGALS3BP, MUC1, MYB (includes EG:4602), NCOA3, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, SPARC, SRPX, TFF3, TGFB1, TGM2, TNFRSF6B, WWOX, XBP1</i>	41
Cell death	Apoptosis	Apoptosis of eukaryotic cells	$1.34 \times 10^{-7}$	<i>AKT3, ANKRD1, ANXA1, ATMIN, B2M, BMP7, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), COL4A2, CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, ESR1, FHL2, FN1, GDF15, HMGA2, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, LGALS3BP, MUC1, MYB (includes EG:4602), NCOA3, PLAGL1, PRAME (includes EG:23532), RAC2, RB1, RET, SDC2, SNCA, SPARC, SRPX, TFF3, TGFB1, TGM2, TNFRSF6B, WWOX, XBP1</i>	51
Cell death	Apoptosis	Apoptosis	$3.98 \times 10^{-7}$	<i>AKT3, ANKRD1, ANXA1, ATMIN, B2M, BMP7, CD24, CDH1, CDH2, CDKN2A, CEACAM6 (includes EG:4680), COL4A2, CREBBP, CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, EIF5A, ESR1, FHL2, FN1, GDF15, GPX1, GSTP1, HMGA2, ICAM2, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, IL7R, LGALS3BP, MUC1, MYB (includes EG:4602), NCOA3, PLAGL1, PRAME (includes EG:23532), RAC2, RB1, RET, SDC2, SNCA, SPARC, SRPX, TFF1, TFF3, TGFB1, TGM2, TNFRSF6B, TPD52L1, WWOX, XBP1, ZNF443</i>	59
Cell death	Apoptosis	Apoptosis of cell lines	$5.22 \times 10^{-7}$	<i>AKT3, ANKRD1, ATMIN, B2M, BMP7, CD24, CDH1, CDKN2A, CEACAM6 (includes EG:4680), CRYAB, CTGF, CXCL12, CYR61, DKK3, DNAJC15, DUSP4, EGFR, ESR1, FHL2, FN1, GDF15, ID2, IFI16, IGFBP3, IGFBP5, IGFBP6, IL18, LGALS3BP, MUC1, MYB (includes EG:4602), NCOA3, PLAGL1, PRAME (includes EG:23532), RB1, RET, SDC2, SPARC, SRPX, TFF3, TGFB1, TGM2, TNFRSF6B, WWOX, XBP1</i>	44
Cell death	Apoptosis	Apoptosis of breast cancer cell lines	$1.09 \times 10^{-4}$	<i>B2M, CDH1, CTGF, CYR61, DUSP4, EGFR, ESR1, FN1, IGFBP3, IGFBP5, MUC1, NCOA3, TGFB1, XBP1</i>	14
Cell death	Apoptosis	Apoptosis of normal cells	$9.54 \times 10^{-4}$	<i>ANXA1, BMP7, CDH1, CDH2, CDKN2A, COL4A2, CRYAB, CTGF, CXCL12, EGFR, FN1, IL7R, RAC2, RB1, SNCA, TGFB1, TNFRSF6B</i>	17
Cell death	Apoptosis	Apoptosis of prostate cancer cell lines	$1.44 \times 10^{-3}$	<i>BMP7, CDKN2A, DKK3, EGFR, GDF15, IGFBP3, IGFBP5, NCOA3</i>	8

Cell death	Apoptosis	Apoptosis of epithelial cells	$1.44 \times 10^{-3}$	<i>CDH1, CRYAB, EGFR, FN1, RB1, TGFB1</i>	6
Cell death	Apoptosis	Apoptosis of bone cancer cell lines	$1.75 \times 10^{-3}$	<i>ATMIN, CDH1, CDKN2A, IGFBP5, PLAGL1, SDC2</i>	6
Cell death	Apoptosis	Apoptosis of t lymphocytes	$2.71 \times 10^{-3}$	<i>CDKN2A, CXCL12, IL7R, RAC2, TGFB1, TNFRSF6B</i>	6
Cell death	Apoptosis	Apoptosis of carcinoma cell lines	$4.04 \times 10^{-3}$	<i>AKT3, CDKN2A, DNAJC15, IGFBP3, IGFBP6, TGFB1</i>	6
Cell death	Apoptosis	Apoptosis of glomerular cells	$7.45 \times 10^{-3}$	<i>CTGF, TGFB1</i>	2
Cell death	Apoptosis	Apoptosis of lung cancer cell lines	$9.08 \times 10^{-3}$	<i>AKT3, CDKN2A, IGFBP3, IGFBP6, RB1, WWOX</i>	6
Cell death	Apoptosis	Apoptosis of embryonic cells	$1.03 \times 10^{-2}$	<i>BMP7, TNFRSF6B</i>	2
Cell death	Apoptosis	Apoptosis of bladder cancer cell lines	$1.71 \times 10^{-2}$	<i>EGFR, IFI16</i>	2
Cell death	Survival	Survival of cell lines	$2.69 \times 10^{-4}$	<i>ABCB1, AXL, BDNF, CA2, CDH1, CDKN2A, CLDN3, CXCL12, EGFR, HMGA1, ID2, IGFBP3, KRT19, MCAM, NUA1, PPP1R3D, PTPRK, S100P, SNCA, TGFB1, TGM2</i>	21
Cell death	Survival	Survival of eukaryotic cells	$6.12 \times 10^{-4}$	<i>ABCB1, AXL, BDNF, CA2, CDH1, CDKN2A, CLDN3, CXCL12, EGFR, FN1, HMGA1, ICAM1, ID2, IGFBP3, KRT19, MCAM, NUA1, PPP1R3D, PTPRK, S100P, SNCA, TGFB1, TGM2</i>	23
Cell death	Survival	Survival of tumor cell lines	$6.95 \times 10^{-4}$	<i>AXL, BDNF, CA2, CDH1, CDKN2A, CLDN3, CXCL12, EGFR, HMGA1, ID2, IGFBP3, KRT19, MCAM, NUA1, PPP1R3D, PTPRK, SNCA, TGM2</i>	18
Cell death	Survival	Survival of neuroblastoma cell lines	$1.74 \times 10^{-3}$	<i>BDNF, SNCA, TGM2</i>	3
Cell death	Survival	Survival of breast cancer cell lines	$3.59 \times 10^{-3}$	<i>CA2, HMGA1, ID2, IGFBP3, KRT19</i>	5
Cell death	Anoikis	Anoikis of dermal cells	$5.28 \times 10^{-4}$	<i>EGFR, FN1</i>	2
Cell death	Cell viability	Cell viability of eukaryotic cells	$9.47 \times 10^{-4}$	<i>CDH2, CXCL12, FKBP1B, FN1, GDF15, GSTP1, IGFBP3, PBX1, SNCA, STC1</i>	10
Cell death	Cell viability	Cell viability of cell lines	$1.23 \times 10^{-2}$	<i>CDH2, FKBP1B, GDF15, GSTP1, PBX1, SNCA, STC1</i>	7

Cell death	Cell viability	Cell viability of tumor cell lines	$1.51 \times 10^{-2}$	<i>CDH2, GDF15, GSTP1, PBX1, SNCA, STC1</i>	6
Cell death	Activation-induced cell death	Activation-induced cell death of T lymphocytes	$1.35 \times 10^{-2}$	<i>RAC2, TGFB1</i>	2
Cell-cell signaling and interaction	Adhesion	Adhesion of cells	$2.75 \times 10^{-8}$	<i>ANXA1, ANXA9, BMP7, CDH1, CDH2, CTGF, CXCL12, CYR61, DKK3, EGFR, EPCAM, FN1, FXYD5, ICAM1, ICAM2, IL18, IL32, LAMB1, LGALS3BP, LOXL2, MCAM, MPZL2, PLTP, PTPRK, RASGRP1, RLN2, RRAS, SDC2, SERPINE1, TGFB1, TGFB11, TGFB1, TGM2, ZYX</i>	34
Cell-cell signaling and interaction	Adhesion	Adhesion of eukaryotic cells	$6.91 \times 10^{-7}$	<i>ANXA1, BMP7, CDH1, CDH2, CTGF, CXCL12, CYR61, DKK3, EGFR, EPCAM, FN1, FXYD5, ICAM1, ICAM2, LGALS3BP, MCAM, PLTP, RASGRP1, RLN2, RRAS, SDC2, TGFB1, TGM2</i>	23
Cell-cell signaling and interaction	Adhesion	Adhesion of cell lines	$6.27 \times 10^{-6}$	<i>ANXA1, BMP7, CDH1, CDH2, CXCL12, DKK3, EGFR, FN1, FXYD5, ICAM1, LGALS3BP, RLN2, RRAS, SDC2, TGFB1, TGM2</i>	16
Cell-cell signaling and interaction	Adhesion	Adhesion of cancer cells	$1.34 \times 10^{-5}$	<i>CDH2, CXCL12, EGFR, FN1, ICAM1, MCAM</i>	6
Cell-cell signaling and interaction	Adhesion	Adhesion of tumor cell lines	$8.77 \times 10^{-5}$	<i>ANXA1, BMP7, CDH1, CDH2, CXCL12, DKK3, EGFR, FN1, FXYD5, ICAM1, RLN2, SDC2</i>	12
Cell-cell signaling and interaction	Adhesion	Adhesion of normal cells	$1.37 \times 10^{-4}$	<i>ANXA1, CDH1, CDH2, CTGF, CXCL12, CYR61, EPCAM, FN1, ICAM1, ICAM2, PLTP, RASGRP1, RLN2, TGFB1</i>	14
Cell-cell signaling and interaction	Adhesion	Adhesion of lymphocytes	$1.07 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1, TGFB1</i>	6
Cell-cell signaling and interaction	Adhesion	Adhesion of leukocytes	$1.19 \times 10^{-3}$	<i>ANXA1, CXCL12, FN1, ICAM1, ICAM2, PLTP, RASGRP1, RLN2, TGFB1</i>	9
Cell-cell signaling and interaction	Adhesion	Adhesion of T lymphocytes	$2.12 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1</i>	5
Cell-cell signaling and interaction	Adhesion	Adhesion of epithelial cells	$3.18 \times 10^{-3}$	<i>CDH1, EPCAM, FN1, ICAM1</i>	4
Cell-cell signaling and interaction	Adhesion	Adhesion of endothelial cells	$4.35 \times 10^{-3}$	<i>CDH2, FN1, ICAM1, ICAM2, TGFB1</i>	5

Cell-cell signaling and interaction	Adhesion	Adhesion of connective tissue cells	$5.41 \times 10^{-3}$	<i>CDH2, CTGF, ICAM1</i>	3
Cell-cell signaling and interaction	Adhesion	Adhesion of embryonic cell lines	$5.41 \times 10^{-3}$	<i>FN1, ICAM1, RRAS</i>	3
Cell-cell signaling and interaction	Adhesion	Adhesion of endothelial cell lines	$5.68 \times 10^{-3}$	<i>ANXA1, CDH2, CXCL12, ICAM1, TGFB1</i>	5
Cell-cell signaling and interaction	Adhesion	Adhesion of lung cancer cell lines	$7.45 \times 10^{-3}$	<i>CXCL12, ICAM1</i>	2
Cell-cell signaling and interaction	Adhesion	Adhesion of leukemia cell lines	$1.10 \times 10^{-2}$	<i>CDH1, FN1, ICAM1, RLN2</i>	4
Cell-cell signaling and interaction	Adhesion	Adhesion of leukocyte cell lines	$1.34 \times 10^{-2}$	<i>ANXA1, TGFB1, TGM2</i>	3
Cell-cell signaling and interaction	Adhesion	Adhesion of melanoma cells	$1.35 \times 10^{-2}$	<i>CDH2, MCAM</i>	2
Cell-cell signaling and interaction	Adhesion	Adhesion of keratinocytes	$1.71 \times 10^{-2}$	<i>CDH1, FN1</i>	2
Cell-cell signaling and interaction	Binding	Binding of cells	$8.98 \times 10^{-6}$	<i>AXL, CALCR, CD24, CEACAM5 (includes EG:1048), CXADR, CXCL12, FN1, GFRA1, ICAM1, IGFBP3, IGFBP5, LGALS3BP, MSN, OXTR, PIK3R1, SDC2, SERPINE1, SPARC, TGFB1, TGM2</i>	20
Cell-cell signaling and interaction	Binding	Binding of cell lines	$1.07 \times 10^{-5}$	<i>AXL, CALCR, CD24, CEACAM5 (includes EG:1048), CXADR, CXCL12, FN1, ICAM1, IGFBP3, IGFBP5, LGALS3BP, OXTR, PIK3R1, SDC2, SERPINE1, TGFB1</i>	16
Cell-cell signaling and interaction	Binding	Binding of eukaryotic cells	$1.52 \times 10^{-5}$	<i>AXL, CALCR, CD24, CEACAM5 (includes EG:1048), CXADR, CXCL12, FN1, GFRA1, ICAM1, IGFBP3, IGFBP5, LGALS3BP, MSN, OXTR, PIK3R1, SDC2, SERPINE1, SPARC, TGFB1</i>	19
Cell-cell signaling and interaction	Binding	Binding of fibroblasts	$3.16 \times 10^{-5}$	<i>IGFBP3, LGALS3BP, SDC2, SPARC</i>	4

Cell-cell signaling and interaction	Binding	Binding of tumor cell lines	$1.11 \times 10^{-3}$	<i>CEACAM5</i> (includes <i>EG:1048</i> ), <i>CXADR</i> , <i>CXCL12</i> , <i>IGFBP5</i> , <i>LGALS3BP</i> , <i>OXTR</i> , <i>PIK3R1</i> , <i>SERPINE1</i> , <i>TGFB1</i>	9
Cell-cell signaling and interaction	Binding	Binding of normal cells	$2.35 \times 10^{-3}$	<i>CD24</i> , <i>CXCL12</i> , <i>FN1</i> , <i>ICAM1</i> , <i>IGFBP3</i> , <i>LGALS3BP</i> , <i>MSN</i> , <i>SDC2</i> , <i>SERPINE1</i> , <i>SPARC</i>	10
Cell-cell signaling and interaction	Binding	Binding of breast cancer cell lines	$5.41 \times 10^{-3}$	<i>IGFBP5</i> , <i>OXTR</i> , <i>SERPINE1</i>	3
Cell-cell signaling and interaction	Binding	Binding of blood platelets	$1.18 \times 10^{-2}$	<i>CD24</i> , <i>FN1</i> , <i>ICAM1</i>	3
Cell-cell signaling and interaction	Binding	Binding of endothelial cell lines	$1.43 \times 10^{-2}$	<i>AXL</i> , <i>FN1</i> , <i>ICAM1</i> , <i>PIK3R1</i>	4
Cell-cell signaling and interaction	Binding	Binding of cancer cells	$1.71 \times 10^{-2}$	<i>CD24</i> , <i>GFRA1</i>	2
Cell-cell signaling and interaction	Activation	Activation of cells	$3.16 \times 10^{-5}$	<i>ADA</i> , <i>AREG</i> , <i>B2M</i> , <i>CD24</i> , <i>CDH1</i> , <i>CEACAM5</i> (includes <i>EG:1048</i> ), <i>CXCL12</i> , <i>EGFR</i> , <i>FN1</i> , <i>ICAM1</i> , <i>ICAM2</i> , <i>MMP1</i> (includes <i>EG:4312</i> ), <i>NUAK1</i> , <i>RLN2</i> , <i>SDC2</i> , <i>TGFB1</i> , <i>TGM2</i> , <i>TNFRSF6B</i>	18
Cell-cell signaling and interaction	Activation	Activation of cell lines	$4.34 \times 10^{-4}$	<i>B2M</i> , <i>CDH1</i> , <i>MMP1</i> (includes <i>EG:4312</i> ), <i>NUAK1</i> , <i>TGFB1</i> , <i>TGM2</i> , <i>TNFRSF6B</i>	7
Cell-cell signaling and interaction	Activation	Activation of eukaryotic cells	$4.93 \times 10^{-4}$	<i>ADA</i> , <i>AREG</i> , <i>B2M</i> , <i>CDH1</i> , <i>CEACAM5</i> (includes <i>EG:1048</i> ), <i>CXCL12</i> , <i>EGFR</i> , <i>FN1</i> , <i>MMP1</i> (includes <i>EG:4312</i> ), <i>NUAK1</i> , <i>RLN2</i> , <i>SDC2</i> , <i>TGFB1</i> , <i>TGM2</i> , <i>TNFRSF6B</i>	15
Cell-cell signaling and interaction	Activation	Activation of muscle cells	$1.56 \times 10^{-3}$	<i>TGFB1</i> , <i>TGM2</i>	2
Cell-cell signaling and interaction	Activation	Activation of kidney cell lines	$1.03 \times 10^{-2}$	<i>TGFB1</i> , <i>TGM2</i>	2
Cell-cell signaling and interaction	Activation	Activation of leukocyte cell lines	$1.35 \times 10^{-2}$	<i>B2M</i> , <i>TNFRSF6B</i>	2
Cell-cell signaling and interaction	Activation	Activation of epithelial cells	$1.71 \times 10^{-2}$	<i>AREG</i> , <i>EGFR</i>	2

Cell–cell signaling and interaction	Attachment	Attachment of eukaryotic cells	$1.80 \times 10^{-4}$	<i>EGFR, FN1, SERPINE1, TFPI2, TGFB1, TGFB1</i>	6
Cell–cell signaling and interaction	Attachment	Attachment of fibroblasts	$1.56 \times 10^{-3}$	<i>FN1, TGFB1</i>	2
Cell–cell signaling and interaction	Attachment	Attachment of cell lines	$2.76 \times 10^{-3}$	<i>EGFR, FN1, SERPINE1, TGFB1</i>	4
Cell–cell signaling and interaction	Attachment	Attachment of normal cells	$6.46 \times 10^{-3}$	<i>FN1, TFPI2, TGFB1</i>	3
Cell–cell signaling and interaction	Attachment	Attachment of breast cancer cell lines	$7.45 \times 10^{-3}$	<i>EGFR, SERPINE1</i>	2
Cell–cell signaling and interaction	Attachment	Attachment of tumor cell lines	$8.90 \times 10^{-3}$	<i>EGFR, SERPINE1, TGFB1</i>	3
Cell–cell signaling and interaction	Contact growth inhibition	Contact growth inhibition	$1.99 \times 10^{-4}$	<i>BMP7, CD24, CDH1, CDKN2A, EGFR, IFI16, TGFB1</i>	7
Cell–cell signaling and interaction	Contact growth inhibition	Contact growth inhibition of eukaryotic cells	$6.87 \times 10^{-4}$	<i>BMP7, CD24, CDH1, EGFR, IFI16, TGFB1</i>	6
Cell–cell signaling and interaction	Contact growth inhibition	Contact growth inhibition of cell lines	$2.12 \times 10^{-3}$	<i>BMP7, CD24, CDH1, EGFR, IFI16</i>	5
Cell–cell signaling and interaction	Contact growth inhibition	Contact growth inhibition of tumor cell lines	$5.30 \times 10^{-3}$	<i>BMP7, CD24, CDH1, IFI16</i>	4
Cell–cell signaling and interaction	Contact growth inhibition	Contact growth inhibition of colon cancer cell lines	$1.03 \times 10^{-2}$	<i>CD24, CDH1</i>	2
Cell–cell signaling and interaction	Formation	Formation of cell-matrix contacts	$1.56 \times 10^{-3}$	<i>CDH1, FN1</i>	2
Cell–cell signaling and interaction	Quantity	Quantity of intercellular junctions	$1.56 \times 10^{-3}$	<i>CDH1, GDF15</i>	2

Cell-cell signaling and interaction	Induction	Induction of T lymphocytes	$3.07 \times 10^{-3}$	<i>IL18, MUC1</i>	2
Cell-cell signaling and interaction	Association	Association of cells	$7.45 \times 10^{-3}$	<i>IGFBP3, TGFB1</i>	2
Cell-cell signaling and interaction	Co-stimulation	Co-stimulation of T lymphocytes	$1.35 \times 10^{-2}$	<i>CD24, FN1</i>	2
Cell-cell signaling and interaction	Detachment	Detachment of eukaryotic cells	$1.52 \times 10^{-2}$	<i>ANXA1, FN1, IGFBP3</i>	3
Cell-cell signaling and interaction	Communication	Communication of cells	$1.52 \times 10^{-2}$	<i>AREG, BST2, CEACAM6 (includes EG:4680), ESR1, GDF15, GJA1, IL18, STC1, TFAP2C, WNT5A, ZYX</i>	11
Tissue development	Adhesion	Adhesion of cells	$2.75 \times 10^{-8}$	<i>ANXA1, ANXA9, BMP7, CDH1, CDH2, CTGF, CXCL12, CYR61, DKK3, EGFR, EPCAM, FN1, FXYD5, ICAM1, ICAM2, IL18, IL32, LAMB1, LGALS3BP, LOXL2, MCAM, MPZL2, PLTP, PTPRK, RASGRP1, RLN2, RRAS, SDC2, SERPINE1, TGFB1, TGFB11, TGFB1, TGM2, ZYX</i>	34
Tissue development	Adhesion	Adhesion of eukaryotic cells	$6.91 \times 10^{-7}$	<i>ANXA1, BMP7, CDH1, CDH2, CTGF, CXCL12, CYR61, DKK3, EGFR, EPCAM, FN1, FXYD5, ICAM1, ICAM2, LGALS3BP, MCAM, PLTP, RASGRP1, RLN2, RRAS, SDC2, TGFB1, TGM2</i>	23
Tissue development	Adhesion	Adhesion of cell lines	$6.27 \times 10^{-6}$	<i>ANXA1, BMP7, CDH1, CDH2, CXCL12, DKK3, EGFR, FN1, FXYD5, ICAM1, LGALS3BP, RLN2, RRAS, SDC2, TGFB1, TGM2</i>	16
Tissue development	Adhesion	Adhesion of cancer cells	$1.34 \times 10^{-5}$	<i>CDH2, CXCL12, EGFR, FN1, ICAM1, MCAM</i>	6
Tissue development	Adhesion	Adhesion of tumor cell lines	$8.77 \times 10^{-5}$	<i>ANXA1, BMP7, CDH1, CDH2, CXCL12, DKK3, EGFR, FN1, FXYD5, ICAM1, RLN2, SDC2</i>	12
Tissue development	Adhesion	Adhesion of normal cells	$1.37 \times 10^{-4}$	<i>ANXA1, CDH1, CDH2, CTGF, CXCL12, CYR61, EPCAM, FN1, ICAM1, ICAM2, PLTP, RASGRP1, RLN2, TGFB1</i>	14
Tissue development	Adhesion	Adhesion of lymphocytes	$1.07 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1, TGFB1</i>	6
Tissue development	Adhesion	Adhesion of leukocytes	$1.19 \times 10^{-3}$	<i>ANXA1, CXCL12, FN1, ICAM1, ICAM2, PLTP, RASGRP1, RLN2, TGFB1</i>	9
Tissue development	Adhesion	Adhesion of T lymphocytes	$2.12 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1</i>	5
Tissue development	Adhesion	Adhesion of epithelial cells	$3.18 \times 10^{-3}$	<i>CDH1, EPCAM, FN1, ICAM1</i>	4

Tissue development	Adhesion	Adhesion of endothelial cells	$4.35 \times 10^{-3}$	<i>CDH2, FN1, ICAM1, ICAM2, TGFB1</i>	5
Tissue development	Adhesion	Adhesion of connective tissue cells	$5.41 \times 10^{-3}$	<i>CDH2, CTGF, ICAM1</i>	3
Tissue development	Adhesion	Adhesion of embryonic cell lines	$5.41 \times 10^{-3}$	<i>FN1, ICAM1, RRAS</i>	3
Tissue development	Adhesion	Adhesion of endothelial cell lines	$5.68 \times 10^{-3}$	<i>ANXA1, CDH2, CXCL12, ICAM1, TGFB1</i>	5
Tissue development	Adhesion	Adhesion of lung cancer cell lines	$7.45 \times 10^{-3}$	<i>CXCL12, ICAM1</i>	2
Tissue development	Adhesion	Adhesion of leukemia cell lines	$1.10 \times 10^{-2}$	<i>CDH1, FN1, ICAM1, RLN2</i>	4
Tissue development	Adhesion	Adhesion of leukocyte cell lines	$1.34 \times 10^{-2}$	<i>ANXA1, TGFB1, TGM2</i>	3
Tissue development	Adhesion	Adhesion of melanoma cells	$1.35 \times 10^{-2}$	<i>CDH2, MCAM</i>	2
Tissue development	Adhesion	Adhesion of keratinocytes	$1.71 \times 10^{-2}$	<i>CDH1, FN1</i>	2
Tissue development	Aggregation	Aggregation of tumor cell lines	$4.71 \times 10^{-4}$	<i>BMP7, CDH1, CEACAM5 (includes EG:1048), ICAM1, TGFB1</i>	5
Tissue development	Aggregation	Aggregation of tumor cells	$1.56 \times 10^{-3}$	<i>CDH2, CEACAM5 (includes EG:1048)</i>	2
Tissue development	Aggregation	Aggregation of cells	$2.42 \times 10^{-3}$	<i>BMP7, CDH1, CDH2, CEACAM5 (includes EG:1048), EGFR, EPCAM, ICAM1, TGFB1</i>	8
Tissue development	Aggregation	Aggregation of lymphoma cell lines	$5.04 \times 10^{-3}$	<i>ICAM1, TGFB1</i>	2
Tissue development	Aggregation	Aggregation of colon cancer cell lines	$7.45 \times 10^{-3}$	<i>CDH1, CEACAM5 (includes EG:1048)</i>	2
Tissue development	Aggregation	Aggregation of fibroblast cell lines	$7.45 \times 10^{-3}$	<i>CDH2, EPCAM</i>	2
Tissue development	Formation	Formation of endothelial tube	$2.37 \times 10^{-3}$	<i>COL4A1, FN1, SERPINE1, TGFB1</i>	4

Cell morphology	Morphology	Morphology of eukaryotic cells	$4.26 \times 10^{-7}$	<i>BMP7, CDH1, CDKN2A, DKK3, EGFR, FN1, FYN, GDF15, IGFBP3, IL18, PEG10, PLAGL1, RB1, SDC2, SERPINE1, TGFB1, VIM</i>	17
Cell morphology	Morphology	Morphology of cells	$6.84 \times 10^{-7}$	<i>BMP7, CDH1, CDKN2A, DKK3, EGFR, FN1, FYN, GDF15, IGFBP3, IL18, MUC1, PEG10, PLAGL1, RB1, SDC2, SERPINE1, TGFB1, VIM</i>	18
Cell morphology	Morphology	Morphology of cell lines	$3.86 \times 10^{-6}$	<i>BMP7, CDH1, CDKN2A, DKK3, EGFR, FYN, GDF15, IGFBP3, PEG10, RB1, SDC2, SERPINE1, TGFB1, VIM</i>	14
Cell morphology	Morphology	Morphology of tumor cell lines	$1.57 \times 10^{-4}$	<i>BMP7, CDH1, CDKN2A, DKK3, EGFR, GDF15, RB1, SDC2, VIM</i>	9
Cell morphology	Morphology	Morphology of bone cancer cell lines	$5.04 \times 10^{-3}$	<i>DKK3, RB1</i>	2
Cell morphology	Morphology	Morphology of cancer cells	$1.03 \times 10^{-2}$	<i>EGFR, PLAGL1</i>	2
Cell morphology	Morphology	Morphology of embryonic cell lines	$1.35 \times 10^{-2}$	<i>IGFBP3, SERPINE1</i>	2
Cell morphology	Morphology	Morphology of gonadal cell lines	$1.35 \times 10^{-2}$	<i>PEG10, SERPINE1</i>	2
Cell morphology	Mineralization	Mineralization of eukaryotic cells	$1.74 \times 10^{-3}$	<i>AXL, SNCA, TGFB1</i>	3
Cell morphology	Mineralization	Mineralization of cell lines	$7.45 \times 10^{-3}$	<i>SNCA, TGFB1</i>	2
Cell morphology	Polarity	Polarity of eukaryotic cells	$5.04 \times 10^{-3}$	<i>CXCL12, EGFR</i>	2
Cell morphology	Tubulation	Tubulation of endothelial cells	$5.41 \times 10^{-3}$	<i>AXL, IGFBP3, MGP</i>	3
Cell morphology	Tubulation	Tubulation of eukaryotic cells	$1.68 \times 10^{-2}$	<i>AXL, CXCL12, IGFBP3, MGP</i>	4
Cell morphology	Length	Length of neurites	$7.45 \times 10^{-3}$	<i>BDNF, ESR1</i>	2
Cell morphology	Shape change	Shape change of fibroblasts	$7.45 \times 10^{-3}$	<i>CDKN2A, FN1</i>	2
Cell morphology	Polarization	Polarization of leukocytes	$7.62 \times 10^{-3}$	<i>CXCL12, FN1, TGFB1</i>	3
Respiratory disease	Non-small cell lung cancer	Non-small cell lung cancer	$2.45 \times 10^{-6}$	<i>AKT3, B2M, CDH1, CDKN2A, DNAJB4, EGFR, EPCAM, FN1, FYN, MAFB, MSLN, RB1, RET, S100P, TUBB2A</i>	15

Respiratory disease	Respiratory disorder	Respiratory disorder	$1.36 \times 10^{-5}$	<i>BDNF, CD24, CTSZ (includes EG:1522), EGFR, ESR1, FN1, GATA3, GLUL, HIST1H2AC, HIST1H2BD, HIST1H2BK, HIST2H2AA3, HIST2H2BE, HMGA2, HNMT, IGFBP3, IL18, MGP, PDGFC, RET, S100P, SPARC, TGFB1, XBP1, ZYX</i>	25
Respiratory disease	Severe acute respiratory syndrome	Severe acute respiratory syndrome	$2.05 \times 10^{-5}$	<i>CD24, CTSZ (includes EG:1522), GLUL, HIST1H2AC, HIST1H2BD, HIST1H2BK, HIST2H2AA3, HIST2H2BE, PDGFC, S100P, SPARC, ZYX</i>	12
Respiratory disease	Non-small-cell lung carcinoma	Non-small-cell lung carcinoma	$4.92 \times 10^{-5}$	<i>AKT3, B2M, CDKN2A, EGFR, EPCAM, FN1, FYN, MAFB, MSLN, RB1, RET, TUBB2A</i>	12
Respiratory disease	Lung carcinoma	Lung carcinoma	$9.52 \times 10^{-5}$	<i>ABCB1, AKT3, B2M, CDKN2A, CLDN3, EGFR, EPCAM, FN1, FYN, LOX, MAFB, MSLN, RB1, RET, TUBB2A</i>	15
Respiratory disease	Lung cancer	Lung cancer	$8.27 \times 10^{-4}$	<i>ABCB1, AKT3, B2M, CDH1, CDKN2A, CLDN3, DNAJB4, EGFR, EPCAM, FN1, FYN, LOX, MAFB, MSLN, RB1, RET, S100P, TUBB2A</i>	18
Respiratory disease	Congenital central hypoventilation syndrome	Congenital central hypoventilation syndrome	$7.45 \times 10^{-3}$	<i>BDNF, RET</i>	2
Neurological disease	Alzheimer disease	Alzheimer disease	$7.95 \times 10^{-6}$	<i>ABAT, AKAP2, ANK3, BDNF, BIN1, CDC42EP3, CDKN2A, COL4A1, COL4A2, CTGF, CXCL12, DNAJC15, EML1 (includes EG:2009), ESR1, EXT1, GATA3, GREB1, GRHL2, HMGA1, ICAM1, IGFBP3, IGFBP6, LEPREL1, LPHN2, MAP1B, MMP1 (includes EG:4312), NEFH, PLTP, RAB3B, RNASET2, SCD, SELENBP1, SERPINA3, SERPINE2, SLC12A8, SNCA, SPARC, STXBP6, TGFB1, TGM2, TUBB2A, UBB, UCHL1, WWOX</i>	44
Neurological disease	Neurological disorder	Neurological disorder of rodents	$6.49 \times 10^{-4}$	<i>ATXN1, BDNF, IL18, SNCA, TGFB1</i>	5
Neurological disease	Neurological disorder	Neurological disorder of mice	$1.72 \times 10^{-3}$	<i>ATXN1, BDNF, SNCA, TGFB1</i>	4
Neurological disease	Neurological disorder	Neurological disorder	$1.93 \times 10^{-3}$	<i>ABAT, ABCB1, AGA, AKAP2, AKAP12, AKR1B1, AKR1C2, AKT3, ANK3, ATXN1, BCAS3, BDNF, BIN1, C6ORF97, CA2, CD24, CDC42EP3, CDH2, CDKN2A, CDS1, COCH, COL4A1, COL4A2, CREBBP, CRYAB, CTGF, CXCL12, DFNA5, DKK3, DNAJC15, DUSP4, ECM1, EGFR, EGR3, EML1 (includes EG:2009), ENOSF1, ESR1, EXT1, FHL2, FNDC3B, FYN, GATA3, GFRA1, GJA1, GNA14, GNAL, GREB1, GRHL2, HIST2H2AA3, HMGA1, ICAM1, ID4, IGFBP3, IGFBP6, IL18, IL7R, ISOC1, LAMB1, LDHB, LEPREL1, LPCAT1, LPHN2, MAP1B, MGP, MLLT11, MMP1 (includes EG:4312), MREG, MT1E, MUC1, NCOA3, NDN, NEFH, NSMAF, OLFM1, ORC5L, PBX1, PIK3R1, PLTP, PSMB9, RAB3B, RAI14, RAMP3, RCN1, RET, RNASET2, S100P, SCD, SCHIP1, SCUBE2, SDC2, SELENBP1, SERPINA3,</i>	115

				<i>SERPINE1, SERPINE2, SGCE, SLC12A2, SLC12A8, SLC16A1, SLC24A3, SLC27A6, SNCA, SOX3, SPARC, SRPX, STXBP6, TGFB1, TGM2, TUBB2A, TUBB2B, UBB, UCHL1, VAV3, VIM, WWOX, XBP1</i>	
Neurological disease	Neurological deficiency	Neurological deficiency	$1.56 \times 10^{-3}$	<i>MGP, TGFB1</i>	2
Neurological disease	Nonsyndromic hearing impairment	Nonsyndromic hearing impairment	$2.28 \times 10^{-3}$	<i>COCH, DFNA5, GRHL2</i>	3
Neurological disease	Glioma	Glioma	$2.74 \times 10^{-3}$	<i>AKT3, CDKN2A, EGFR, ESR1, ID2, PDGFC, RB1, RET</i>	8
Neurological disease	Brain tumor	Brain tumor	$3.08 \times 10^{-3}$	<i>ABAT, AKT3, CDKN2A, EGFR, ESR1, FYN, ID2, PDGFC, RB1, RET, TGFB1, TUBB2A</i>	12
Neurological disease	Astrocytoma	Astrocytoma	$3.20 \times 10^{-3}$	<i>AKT3, EGFR, ESR1, ID2, PDGFC, RET</i>	6
Neurological disease	Glioblastoma	Glioblastoma	$4.76 \times 10^{-3}$	<i>AKT3, EGFR, ESR1, PDGFC, RET</i>	5
Neurological disease	Congenital central hypoventilation syndrome	Congenital central hypoventilation syndrome	$7.45 \times 10^{-3}$	<i>BDNF, RET</i>	2
Neurological disease	Progressive supranuclear palsy	Progressive supranuclear palsy	$9.07 \times 10^{-3}$	<i>ABAT, SERPINA3, TGM2, UBB</i>	4
Cellular compromise	Adhesion	Adhesion of cancer cells	$1.34 \times 10^{-5}$	<i>CDH2, CXCL12, EGFR, FN1, ICAM1, MCAM</i>	6
Cellular compromise	Adhesion	Adhesion of melanoma cells	$1.35 \times 10^{-2}$	<i>CDH2, MCAM</i>	2
Cellular compromise	Aggregation	Aggregation of tumor cells	$1.56 \times 10^{-3}$	<i>CDH2, CEACAM5 (includes EG:1048)</i>	2
Tumor morphology	Adhesion	Adhesion of cancer cells	$1.34 \times 10^{-5}$	<i>CDH2, CXCL12, EGFR, FN1, ICAM1, MCAM</i>	6
Tumor morphology	Adhesion	Adhesion of melanoma cells	$1.35 \times 10^{-2}$	<i>CDH2, MCAM</i>	2
Tumor morphology	Aggregation	Aggregation of tumor cells	$1.56 \times 10^{-3}$	<i>CDH2, CEACAM5 (includes EG:1048)</i>	2

Tumor morphology	Invasion	Invasion of melanoma cells	$7.45 \times 10^{-3}$	<i>CDH1, MCAM</i>	2
Tumor morphology	Morphology	Morphology of cancer cells	$1.03 \times 10^{-2}$	<i>EGFR, PLAGL1</i>	2
Cell cycle	Cell division process	Cell division process of eukaryotic cells	$1.43 \times 10^{-5}$	<i>AXL, BMP7, CALCR, CCNE2, CDH1, CDKN2A, COL1A1, CYR61, DNAJB4, EGFR, ESR1, FN1, GDF15, GNAI1, HMGA1, ID2, IFI16, IGFBP3, IGFBP5, IRS1, KRT19, MYB (includes EG:4602), NCOA3, PLAGL1, RB1, SPARC, TGFB1, XBP1</i>	28
Cell cycle	Cell division process	Cell division process	$3.11 \times 10^{-5}$	<i>AXL, BCAT1, BMP7, BOP1, BTG3, CALCR, CCNE2, CDH1, CDKN2A, COL1A1, CREBBP, CXCL12, CYR61, DHRS2 (includes EG:10202), DNAJB4, EGFR, ESR1, FN1, FOSL1, GDF15, GNAI1, HMGA1, ID2, IFI16, IGFBP3, IGFBP5, IRS1, KRT19, MYB (includes EG:4602), NCOA3, PLAGL1, PTPRK, RB1, SPARC, TGFB1, TPD52L1, UBB, XBP1</i>	38
Cell cycle	Cell division process	Cell division process of cell lines	$1.58 \times 10^{-4}$	<i>AXL, CALCR, CDH1, CDKN2A, CYR61, DNAJB4, EGFR, ESR1, GDF15, GNAI1, HMGA1, IFI16, IGFBP3, IGFBP5, IRS1, KRT19, MYB (includes EG:4602), NCOA3, PLAGL1, RB1, SPARC, TGFB1, XBP1</i>	23
Cell cycle	Cell division process	Cell division process of tumor cell lines	$2.00 \times 10^{-4}$	<i>AXL, CDH1, CDKN2A, CYR61, DNAJB4, EGFR, ESR1, GDF15, GNAI1, HMGA1, IFI16, IGFBP3, IGFBP5, KRT19, MYB (includes EG:4602), NCOA3, PLAGL1, RB1, TGFB1, XBP1</i>	20
Cell cycle	Cell division process	Cell division process of thyrocytes	$5.28 \times 10^{-4}$	<i>CDKN2A, TGFB1</i>	2
Cell cycle	Cell division process	Arrest in cell division process of carcinoma cell lines	$6.52 \times 10^{-4}$	<i>CDKN2A, CYR61, IFI16, RB1</i>	4
Cell cycle	Cell division process	Cell division process of breast cancer cell lines	$6.88 \times 10^{-4}$	<i>CDH1, CDKN2A, EGFR, ESR1, GDF15, IGFBP5, KRT19, XBP1</i>	8
Cell cycle	Cell division process	Cell division process of carcinoma cell lines	$1.01 \times 10^{-3}$	<i>CDKN2A, CYR61, DNAJB4, IFI16, RB1</i>	5
Cell cycle	Cell division process	Arrest in cell division process of eukaryotic cells	$1.20 \times 10^{-3}$	<i>CALCR, CDKN2A, COL1A1, CYR61, EGFR, FN1, GDF15, IFI16, IGFBP5, KRT19, PLAGL1, RB1, TGFB1, XBP1</i>	14

Cell cycle	Cell division process	Arrest in cell division process of normal cells	$1.31 \times 10^{-3}$	<i>CDKN2A, COL1A1, FN1, RB1, TGFB1</i>	5
Cell cycle	Cell division process	Arrest in cell division process of breast cancer cell lines	$2.94 \times 10^{-3}$	<i>EGFR, GDF15, IGFBP5, KRT19, XBP1</i>	5
Cell cycle	Cell division process	Arrest in cell division process of tumor cell lines	$3.29 \times 10^{-3}$	<i>CDKN2A, CYR61, EGFR, GDF15, IFI16, IGFBP5, KRT19, PLAGL1, RB1, TGFB1, XBP1</i>	11
Cell cycle	Cell division process	Cell division process of lung cell lines	$3.64 \times 10^{-3}$	<i>CDKN2A, NCOA3, SPARC</i>	3
Cell cycle	Cell division process	Entry into cell division process	$4.97 \times 10^{-3}$	<i>CDH1, CDKN2A, CREBBP, FN1, NCOA3, RB1, TGFB1</i>	7
Cell cycle	Cell division process	Arrest in cell division process of cell lines	$5.19 \times 10^{-3}$	<i>CALCR, CDKN2A, CYR61, EGFR, GDF15, IFI16, IGFBP5, KRT19, PLAGL1, RB1, TGFB1, XBP1</i>	12
Cell cycle	Cell division process	Cell division process of normal cells	$5.61 \times 10^{-3}$	<i>BMP7, CCNE2, CDKN2A, COL1A1, FN1, ID2, RB1, TGFB1</i>	8
Cell cycle	Cell division process	Cell division process of epithelial cell lines	$9.99 \times 10^{-3}$	<i>CALCR, CDKN2A, IRS1, TGFB1</i>	4
Cell cycle	Cell division process	Cell division process of lung cancer cell lines	$1.10 \times 10^{-2}$	<i>CDKN2A, CYR61, DNAJB4, RB1</i>	4
Cell cycle	Cell division process	Arrest in cell division process of lung cancer cell lines	$1.18 \times 10^{-2}$	<i>CDKN2A, CYR61, RB1</i>	3
Cell cycle	Cell cycle progression	Arrest in cell cycle progression of eukaryotic cells	$8.92 \times 10^{-5}$	<i>CDKN2A, COL1A1, EGFR, IFI16, KRT19, PLAGL1, RB1, TGFB1, XBP1</i>	9
Cell cycle	Cell cycle progression	Cell cycle progression of cell lines	$1.56 \times 10^{-4}$	<i>CDKN2A, DNAJB4, EGFR, ESR1, IFI16, IRS1, KRT19, PLAGL1, RB1, TGFB1, XBP1</i>	11

Cell cycle	Cell cycle progression	Cell cycle progression	$2.22 \times 10^{-4}$	<i>AXL, BMP7, BOP1, BTG3, CDKN2A, COL1A1, CXCL12, CYR61, DHRS2 (includes EG:10202), DNAJB4, EGFR, ESR1, FOSL1, IFI16, IGFBP3, IRS1, KRT19, PLAGL1, PTPRK, RB1, SPARC, TGFB1, UBB, XBP1</i>	24
Cell cycle	Cell cycle progression	Arrest in cell cycle progression of blood cells	$2.29 \times 10^{-4}$	<i>CDKN2A, COL1A1, TGFB1</i>	3
Cell cycle	Cell cycle progression	Cell cycle progression of eukaryotic cells	$2.32 \times 10^{-4}$	<i>CDKN2A, COL1A1, DNAJB4, EGFR, ESR1, IFI16, IRS1, KRT19, PLAGL1, RB1, TGFB1, XBP1</i>	12
Cell cycle	Cell cycle progression	Arrest in cell cycle progression of tumor cell lines	$2.82 \times 10^{-4}$	<i>CDKN2A, EGFR, IFI16, KRT19, PLAGL1, RB1, XBP1</i>	7
Cell cycle	Cell cycle progression	Cell cycle progression of tumor cell lines	$6.09 \times 10^{-4}$	<i>CDKN2A, DNAJB4, EGFR, ESR1, IFI16, KRT19, PLAGL1, RB1, XBP1</i>	9
Cell cycle	Cell cycle progression	Cell cycle progression of carcinoma cell lines	$1.28 \times 10^{-3}$	<i>DNAJB4, IFI16, RB1</i>	3
Cell cycle	Cell cycle progression	Arrest in cell cycle progression of carcinoma cell lines	$1.56 \times 10^{-3}$	<i>IFI16, RB1</i>	2
Cell cycle	Cell cycle progression	Cell cycle progression of bone cancer cell lines	$2.28 \times 10^{-3}$	<i>CDKN2A, PLAGL1, RB1</i>	3
Cell cycle	Cell cycle progression	Cell cycle progression of fibroblast cell lines	$2.91 \times 10^{-3}$	<i>CDKN2A, IRS1, RB1</i>	3
Cell cycle	Cell cycle progression	Arrest in cell cycle progression of bone cancer cell lines	$3.07 \times 10^{-3}$	<i>CDKN2A, PLAGL1</i>	2
Cell cycle	Cell cycle progression	Cell cycle progression of t lymphocytes	$5.04 \times 10^{-3}$	<i>CDKN2A, TGFB1</i>	2

Cell cycle	Cell cycle progression	Cell cycle progression of normal cells	$1.20 \times 10^{-2}$	<i>CDKN2A, COL1A1, RB1, TGFB1</i>	4
Cell cycle	Cell cycle progression	Cell cycle progression of lung cancer cell lines	$1.35 \times 10^{-2}$	<i>DNAJB4, RB1</i>	2
Cell cycle	G1 phase	G1 phase of normal cells	$2.29 \times 10^{-4}$	<i>CCNE2, FN1, ID2, RB1</i>	4
Cell cycle	G1 phase	G1 phase of eukaryotic cells	$3.04 \times 10^{-4}$	<i>CCNE2, CDKN2A, CYR61, EGFR, FN1, GDF15, HMGA1, ID2, NCOA3, RB1, TGFB1</i>	11
Cell cycle	G1 phase	G1 phase of epithelial cells	$3.07 \times 10^{-3}$	<i>ID2, RB1</i>	2
Cell cycle	G1 phase	Arrest in G1 phase of eukaryotic cells	$5.60 \times 10^{-3}$	<i>CDKN2A, CYR61, EGFR, FN1, GDF15, RB1, TGFB1</i>	7
Cell cycle	G1 phase	G1 phase of tumor cell lines	$9.17 \times 10^{-3}$	<i>CDKN2A, CYR61, EGFR, GDF15, HMGA1, NCOA3, TGFB1</i>	7
Cell cycle	G1 phase	Arrest in G1 phase of normal cells	$1.35 \times 10^{-2}$	<i>FN1, RB1</i>	2
Cell cycle	G1/S phase transition	G1/S phase transition of normal cells	$3.94 \times 10^{-4}$	<i>CCNE2, FN1, ID2</i>	3
Cell cycle	G1/S phase transition	G1/S phase transition of eukaryotic cells	$1.59 \times 10^{-3}$	<i>CCNE2, CDKN2A, FN1, HMGA1, ID2, NCOA3</i>	6
Cell cycle	S phase	Entry into S phase of cell lines	$8.74 \times 10^{-4}$	<i>CDH1, CDKN2A, NCOA3, RB1, TGFB1</i>	5
Cell cycle	S phase	Entry into S phase of colon cancer cell lines	$1.56 \times 10^{-3}$	<i>CDH1, CDKN2A</i>	2
Cell cycle	S phase	Entry into S phase of lung cell lines	$1.56 \times 10^{-3}$	<i>CDKN2A, NCOA3</i>	2
Cell cycle	S phase	S phase of cell lines	$7.07 \times 10^{-3}$	<i>CDH1, CDKN2A, EGFR, NCOA3, RB1, TGFB1</i>	6
Cell cycle	S phase	S phase of tumor cell lines	$9.85 \times 10^{-3}$	<i>CDH1, CDKN2A, EGFR, RB1, TGFB1</i>	5

Cell cycle	S phase	Entry into S phase of fibroblast cell lines	$1.03 \times 10^{-2}$	<i>CDKN2A, NCOA3</i>	2
Cell cycle	Interphase	Entry into interphase of eukaryotic cells	$1.18 \times 10^{-3}$	<i>CDH1, CDKN2A, FN1, NCOA3, RB1, TGFB1</i>	6
Cell cycle	Interphase	Interphase of eukaryotic cells	$1.34 \times 10^{-3}$	<i>CALCR, CCNE2, CDH1, CDKN2A, CYR61, EGFR, FN1, GDF15, HMGA1, ID2, IGFBP5, MYB (includes EG:4602), NCOA3, RB1, TGFB1</i>	15
Cell cycle	Interphase	Interphase of normal cells	$2.94 \times 10^{-3}$	<i>CCNE2, CDKN2A, FN1, ID2, RB1</i>	5
Cell cycle	Interphase	Interphase of tumor cell lines	$5.74 \times 10^{-3}$	<i>CDH1, CDKN2A, CYR61, EGFR, GDF15, HMGA1, IGFBP5, MYB (includes EG:4602), NCOA3, RB1, TGFB1</i>	11
Cell cycle	Interphase	Interphase of cell lines	$9.76 \times 10^{-3}$	<i>CALCR, CDH1, CDKN2A, CYR61, EGFR, GDF15, HMGA1, IGFBP5, MYB (includes EG:4602), NCOA3, RB1, TGFB1</i>	12
Cell cycle	Interphase	Interphase of breast cancer cell lines	$9.85 \times 10^{-3}$	<i>CDH1, CDKN2A, EGFR, GDF15, IGFBP5</i>	5
Cell cycle	Interphase	Interphase of carcinoma cell lines	$1.03 \times 10^{-2}$	<i>CDKN2A, CYR61, RB1</i>	3
Cell cycle	Interphase	Interphase of epithelial cell lines	$1.03 \times 10^{-2}$	<i>CALCR, CDKN2A, TGFB1</i>	3
Cell cycle	Cell stage	Cell stage	$2.26 \times 10^{-3}$	<i>AXL, BCAT1, BMP7, BTG3, CALCR, CCNE2, CDH1, CDKN2A, CREBBP, CXCL12, CYR61, EGFR, FN1, GDF15, GNAI1, HMGA1, ID2, IGFBP3, IGFBP5, MYB (includes EG:4602), NCOA3, RB1, SPARC, TGFB1, TPD52L1</i>	25
Cell cycle	Cell stage	Entry into cell stage	$2.59 \times 10^{-3}$	<i>CDH1, CDKN2A, CREBBP, FN1, NCOA3, RB1, TGFB1</i>	7
Cell cycle	Cell stage	Cell stage of eukaryotic cells	$3.92 \times 10^{-3}$	<i>BMP7, CALCR, CCNE2, CDH1, CDKN2A, CYR61, EGFR, FN1, GDF15, GNAI1, HMGA1, ID2, IGFBP5, MYB (includes EG:4602), NCOA3, RB1, TGFB1</i>	17
Cell cycle	Cell stage	Cell stage of normal cells	$5.79 \times 10^{-3}$	<i>BMP7, CCNE2, CDKN2A, FN1, ID2, RB1</i>	6
Cell cycle	Mitogenesis	Mitogenesis	$8.55 \times 10^{-3}$	<i>AXL, CYR61, EGFR, IGFBP3, SPARC, TGFB1</i>	6
Connective tissue development and function	Proliferation	Proliferation of chondrocytes	$1.79 \times 10^{-5}$	<i>CTGF, IGFBP3, IL18, STC1</i>	4

Connective tissue development and function	Proliferation	Proliferation of fibroblast cell lines	$1.68 \times 10^{-2}$	<i>CDKN2A, CXCL12, FN1, S100P, TGFB1</i>	5
Connective tissue development and function	Binding	Binding of fibroblasts	$3.16 \times 10^{-5}$	<i>IGFBP3, LGALS3BP, SDC2, SPARC</i>	4
Connective tissue development and function	Attachment	Attachment of fibroblasts	$1.56 \times 10^{-3}$	<i>FN1, TGFB1</i>	2
Connective tissue development and function	Growth	Growth of fibroblast cell lines	$1.66 \times 10^{-3}$	<i>EGFR, FN1, IGFBP3, IRS1, NRCAM, RET, TGFB1</i>	7
Connective tissue development and function	Cell cycle progression	Cell cycle progression of fibroblast cell lines	$2.91 \times 10^{-3}$	<i>CDKN2A, IRS1, RB1</i>	3
Connective tissue development and function	Aggregation	Aggregation of fibroblast cell lines	$7.45 \times 10^{-3}$	<i>CDH2, EPCAM</i>	2
Connective tissue development and function	Shape change	Shape change of fibroblasts	$7.45 \times 10^{-3}$	<i>CDKN2A, FN1</i>	2
Connective tissue development and function	S phase	Entry into S phase of fibroblast cell lines	$1.03 \times 10^{-2}$	<i>CDKN2A, NCOA3</i>	2
Connective tissue development and function	Differentiation	Differentiation of chondrocytes	$1.03 \times 10^{-2}$	<i>STC1, TGFB1</i>	2
Connective tissue development and function	Differentiation	Differentiation of fibroblast cell lines	$1.52 \times 10^{-2}$	<i>BMP7, MGP, TGFB1</i>	3

Infectious disease	Severe acute respiratory syndrome	Severe acute respiratory syndrome	$2.05 \times 10^{-5}$	<i>CD24, CTSZ (includes EG:1522), GLUL, HIST1H2AC, HIST1H2BD, HIST1H2BK, HIST2H2AA3, HIST2H2BE, PDGFC, S100P, SPARC, ZYX</i>	12
Hematopoiesis	Migration	Migration of myeloid cells	$6.84 \times 10^{-5}$	<i>ANXA1, CXCL12, FN1, ICAM1, SERPINE1, TGFB1, TGM2</i>	7
Hematopoiesis	Migration	Migration of neutrophils	$3.97 \times 10^{-4}$	<i>ANXA1, FN1, ICAM1, SERPINE1, TGFB1</i>	5
Hematopoiesis	Migration	Migration of granulocytes	$4.78 \times 10^{-4}$	<i>ANXA1, CXCL12, FN1, ICAM1, SERPINE1, TGFB1</i>	6
Hematopoiesis	Differentiation	Differentiation of T lymphocytes	$2.81 \times 10^{-4}$	<i>CDKN2A, CXCL12, GATA3, IL18, MUC1, TGFB1</i>	6
Hematopoiesis	Differentiation	Differentiation of mononuclear leukocytes	$4.13 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IFI16, IL18, MUC1, TGFB1</i>	7
Hematopoiesis	Differentiation	Differentiation of Th2 cells	$5.04 \times 10^{-3}$	<i>GATA3, TGFB1</i>	2
Hematopoiesis	Development	T cell development	$1.70 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	9
Hematopoiesis	Development	Development of blood cells	$2.13 \times 10^{-3}$	<i>CDKN2A, CXCL12, EGFR, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	10
Hematopoiesis	Apoptosis	Apoptosis of T lymphocytes	$2.71 \times 10^{-3}$	<i>CDKN2A, CXCL12, IL7R, RAC2, TGFB1, TNFRSF6B</i>	6
Hematopoiesis	Induction	Induction of T lymphocytes	$3.07 \times 10^{-3}$	<i>IL18, MUC1</i>	2
Hematopoiesis	Activation-induced cell death	Activation-induced cell death of T lymphocytes	$1.35 \times 10^{-2}$	<i>RAC2, TGFB1</i>	2
Immune cell trafficking	Migration	Migration of myeloid cells	$6.84 \times 10^{-5}$	<i>ANXA1, CXCL12, FN1, ICAM1, SERPINE1, TGFB1, TGM2</i>	7
Immune cell trafficking	Migration	Migration of neutrophils	$3.97 \times 10^{-4}$	<i>ANXA1, FN1, ICAM1, SERPINE1, TGFB1</i>	5
Immune cell trafficking	Migration	Migration of granulocytes	$4.78 \times 10^{-4}$	<i>ANXA1, CXCL12, FN1, ICAM1, SERPINE1, TGFB1</i>	6
Immune cell trafficking	Migration	Lymphocyte migration	$6.53 \times 10^{-4}$	<i>CXCL12, EGFR, FN1, ICAM1, ICAM2, IL18, RASGRP1, TGM2, TNFRSF6B</i>	9
Immune cell trafficking	Migration	Migration of mononuclear leukocytes	$8.93 \times 10^{-4}$	<i>CXCL12, EGFR, FN1, ICAM1, ICAM2, IL18, RASGRP1, TGFB1, TGM2, TNFRSF6B</i>	10
Immune cell trafficking	Migration	Migration of leukocytes	$1.64 \times 10^{-3}$	<i>ANXA1, CXCL12, EGFR, FN1, ICAM1, ICAM2, IL18, RASGRP1, RLN2, SERPINA3, SERPINE1, TGFB1, TGM2, TNFRSF6B</i>	14

Immune cell trafficking	Adhesion	Adhesion of lymphocytes	$1.07 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1, TGFB1</i>	6
Immune cell trafficking	Adhesion	Adhesion of leukocytes	$1.19 \times 10^{-3}$	<i>ANXA1, CXCL12, FN1, ICAM1, ICAM2, PLTP, RASGRP1, RLN2, TGFB1</i>	9
Immune cell trafficking	Adhesion	Adhesion of T lymphocytes	$2.12 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1</i>	5
Cardiovascular system development and function	Neovascularization	Neovascularization	$7.99 \times 10^{-5}$	<i>CXCL12, ICAM1, TGFB1, TNFRSF6B</i>	4
Cardiovascular system development and function	Neovascularization	Neovascularization of animal	$1.56 \times 10^{-3}$	<i>CXCL12, TNFRSF6B</i>	2
Cardiovascular system development and function	Cardiovascular process	Cardiovascular process of coronary artery	$8.61 \times 10^{-4}$	<i>EMP1, EMP3, ICAM1, IFI16, RB1, TUBB6</i>	6
Cardiovascular system development and function	Cardiovascular process	Cardiovascular process of blood vessel	$2.28 \times 10^{-3}$	<i>COL4A2, EMP1, EMP3, ICAM1, IFI16, RB1, TGFB1, TUBB6</i>	8
Cardiovascular system development and function	Cardiovascular process	Cardiovascular process of animal	$6.46 \times 10^{-3}$	<i>CXCL12, CYR61, TNFRSF6B</i>	3
Cardiovascular system development and function	Formation	Formation of endothelial tube	$2.37 \times 10^{-3}$	<i>COL4A1, FN1, SERPINE1, TGFB1</i>	4
Cardiovascular system development and function	Formation	Formation of endothelial cells	$1.35 \times 10^{-2}$	<i>FN1, SERPINE1</i>	2
Cardiovascular system development and function	Proliferation	Proliferation of endothelial cells	$3.19 \times 10^{-3}$	<i>AXL, CDH2, COL4A1, COL4A2, ECM1, FN1, MGP</i>	7

Cardiovascular system development and function	Adhesion	Adhesion of endothelial cells	$4.35 \times 10^{-3}$	<i>CDH2, FN1, ICAM1, ICAM2, TGFB1</i>	5
Cardiovascular system development and function	Adhesion	Adhesion of endothelial cell lines	$5.68 \times 10^{-3}$	<i>ANXA1, CDH2, CXCL12, ICAM1, TGFB1</i>	5
Cardiovascular system development and function	Tubulation	Tubulation of endothelial cells	$5.41 \times 10^{-3}$	<i>AXL, IGFBP3, MGP</i>	3
Cardiovascular system development and function	Development	Development of blood vessel	$6.52 \times 10^{-3}$	<i>COL1A1, COL4A2, CYR61, ECM1, FN1, IL18, SERPINE1, SPARC</i>	8
Cardiovascular system development and function	Angiogenesis	Angiogenesis	$1.35 \times 10^{-2}$	<i>COL4A2, CYR61, ECM1, FN1, IL18, SERPINE1, SPARC</i>	7
Cardiovascular system development and function	Binding	Binding of endothelial cell lines	$1.43 \times 10^{-2}$	<i>AXL, FN1, ICAM1, PIK3R1</i>	4
Organismal development	Neovascularization	Neovascularization	$7.99 \times 10^{-5}$	<i>CXCL12, ICAM1, TGFB1, TNFRSF6B</i>	4
Organismal development	Neovascularization	Neovascularization of animal	$1.56 \times 10^{-3}$	<i>CXCL12, TNFRSF6B</i>	2
Organismal development	Development	Development of blood vessel	$6.52 \times 10^{-3}$	<i>COL1A1, COL4A2, CYR61, ECM1, FN1, IL18, SERPINE1, SPARC</i>	8
Organismal development	Angiogenesis	Angiogenesis	$1.35 \times 10^{-2}$	<i>COL4A2, CYR61, ECM1, FN1, IL18, SERPINE1, SPARC</i>	7
Tissue morphology	Quantity	Quantity of cells	$8.16 \times 10^{-5}$	<i>BDNF, BMP7, CDKN2A, CXCL12, ESR1, FN1, IGFBP3, IGFBP5, IGFBP6, KLF4, RB1, SNCA, STC1, TGFB1</i>	14
Tissue morphology	Quantity	Quantity of tumor cell lines	$1.92 \times 10^{-3}$	<i>CDKN2A, ESR1, IGFBP3, IGFBP5, IGFBP6, KLF4</i>	6
Tissue morphology	Quantity	Quantity of prostate cancer cell lines	$5.04 \times 10^{-3}$	<i>IGFBP3, IGFBP5</i>	2

Dermatologic diseases and conditions	Burn	Burn	$1.37 \times 10^{-4}$	<i>COL1A1, COL21A1, COL4A1, COL4A2, COL6A1, COL6A2, ESR1</i>	7
Dermatologic diseases and conditions	Cutis laxa, recessive type 1	Cutis laxa, recessive type 1	$1.56 \times 10^{-3}$	<i>EFEMP2, LOX</i>	2
Dermatologic diseases and conditions	Dermatological disorder	Dermatological disorder	$1.40 \times 10^{-2}$	<i>ADA, AREG, CDKN2A, COL1A1, COL21A1, COL4A1, COL4A2, COL6A1, COL6A2, ECM1, EFEMP2, EGFR, ESR1, FN1, FYN, GDF15, GJA1, LOX, MMP1 (includes EG:4312), TGFB1, TUBB2A, ZNF395</i>	22
DNA replication, recombination, and repair	Synthesis	Synthesis of DNA	$1.44 \times 10^{-4}$	<i>AREG, BMP7, CDKN2A, CXCL12, CYR61, EGFR, ESR1, FN1, IGFBP3, IGFBP5, PIK3R1, RB1, TFPI2, TGFB1</i>	14
DNA replication, recombination, and repair	Bending	Bending of DNA	$5.28 \times 10^{-4}$	<i>ESR1, TFF1</i>	2
DNA replication, recombination, and repair	Incorporation	Incorporation of thymidine	$2.12 \times 10^{-3}$	<i>CDKN2A, EGFR, FN1, IGFBP5, TGFB1</i>	5
DNA replication, recombination, and repair	Fragmentation	Fragmentation of DNA	$3.40 \times 10^{-3}$	<i>ABCB1, CDKN2A, CXCL12, GPX1, TFF3, TGFB1, TPD52L1</i>	7
DNA replication, recombination, and repair	Metabolism	Metabolism of DNA	$9.46 \times 10^{-3}$	<i>ABCB1, AREG, CDKN2A, CXCL12, GPX1, KRT7, NT5E, ORC5L, PDGFC, TFF3, TGFB1, TPD52L1</i>	12
Cellular function and maintenance	Contact growth inhibition	Contact growth inhibition	$1.99 \times 10^{-4}$	<i>BMP7, CD24, CDH1, CDKN2A, EGFR, IFI16, TGFB1</i>	7
Cellular function and maintenance	Contact growth inhibition	Contact growth inhibition of eukaryotic cells	$6.87 \times 10^{-4}$	<i>BMP7, CD24, CDH1, EGFR, IFI16, TGFB1</i>	6
Cellular function and maintenance	Contact growth inhibition	Contact growth inhibition of cell lines	$2.12 \times 10^{-3}$	<i>BMP7, CD24, CDH1, EGFR, IFI16</i>	5

Cellular function and maintenance	Contact growth inhibition	Contact growth inhibition of tumor cell lines	$5.30 \times 10^{-3}$	<i>BMP7, CD24, CDH1, IFI16</i>	4
Cellular function and maintenance	Contact growth inhibition	Contact growth inhibition of colon cancer cell lines	$1.03 \times 10^{-2}$	<i>CD24, CDH1</i>	2
Cellular function and maintenance	Differentiation	Differentiation of T lymphocytes	$2.81 \times 10^{-4}$	<i>CDKN2A, CXCL12, GATA3, IL18, MUC1, TGFB1</i>	6
Cellular function and maintenance	Differentiation	Differentiation of Th2 cells	$5.04 \times 10^{-3}$	<i>GATA3, TGFB1</i>	2
Cellular function and maintenance	Organization	Organization of cytoskeleton	$3.23 \times 10^{-4}$	<i>CXCL12, FN1, FSCN1, ICAM1, PLS3, SDC2</i>	6
Cellular function and maintenance	Organization	Organization of actin cytoskeleton	$3.64 \times 10^{-3}$	<i>CXCL12, FN1, FSCN1, ICAM1</i>	4
Cellular function and maintenance	Metabolic process	Metabolic process of tumor cell lines	$5.28 \times 10^{-4}$	<i>EPCAM, SNCA</i>	2
Cellular function and maintenance	Development	T cell development	$1.70 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	9
Cellular function and maintenance	Apoptosis	Apoptosis of T lymphocytes	$2.71 \times 10^{-3}$	<i>CDKN2A, CXCL12, IL7R, RAC2, TGFB1, TNFRSF6B</i>	6
Cellular function and maintenance	Cytostasis	Cytostasis of colon cancer cell lines	$2.91 \times 10^{-3}$	<i>CD24, CDH1, TGFB1</i>	3
Cellular function and maintenance	Cytostasis	Cytostasis of eukaryotic cells	$3.66 \times 10^{-3}$	<i>BMP7, CD24, CDH1, CDKN2A, EGFR, ID2, IFI16, TGFB1</i>	8
Cellular function and maintenance	Cytostasis	Cytostasis of epithelial cell lines	$5.04 \times 10^{-3}$	<i>EGFR, TGFB1</i>	2
Cellular function and maintenance	Cytostasis	Cytostasis of tumor cell lines	$7.07 \times 10^{-3}$	<i>BMP7, CD24, CDH1, EGFR, IFI16, TGFB1</i>	6

Cellular function and maintenance	Cytostasis	Cytostasis of normal cells	$1.03 \times 10^{-2}$	<i>CDKN2A, ID2, TGFB1</i>	3
Cellular function and maintenance	Induction	Induction of T lymphocytes	$3.07 \times 10^{-3}$	<i>IL18, MUC1</i>	2
Cellular function and maintenance	Activation-induced cell death	Activation-induced cell death of T lymphocytes	$1.35 \times 10^{-2}$	<i>RAC2, TGFB1</i>	2
Cell-mediated immune response	Differentiation	Differentiation of T lymphocytes	$2.81 \times 10^{-4}$	<i>CDKN2A, CXCL12, GATA3, IL18, MUC1, TGFB1</i>	6
Cell-mediated immune response	Differentiation	Differentiation of Th2 cells	$5.04 \times 10^{-3}$	<i>GATA3, TGFB1</i>	2
Cell-mediated immune response	Development	T cell development	$1.70 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	9
Cell-mediated immune response	Adhesion	Adhesion of T lymphocytes	$2.12 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1</i>	5
Cell-mediated immune response	Apoptosis	Apoptosis of T lymphocytes	$2.71 \times 10^{-3}$	<i>CDKN2A, CXCL12, IL7R, RAC2, TGFB1, TNFRSF6B</i>	6
Cell-mediated immune response	Induction	Induction of T lymphocytes	$3.07 \times 10^{-3}$	<i>IL18, MUC1</i>	2
Cell-mediated immune response	Activation-induced cell death	Activation-induced cell death of T lymphocytes	$1.35 \times 10^{-2}$	<i>RAC2, TGFB1</i>	2
Hematological system development and function	Differentiation	Differentiation of T lymphocytes	$2.81 \times 10^{-4}$	<i>CDKN2A, CXCL12, GATA3, IL18, MUC1, TGFB1</i>	6
Hematological system development and function	Differentiation	Differentiation of mononuclear leukocytes	$4.13 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IFI16, IL18, MUC1, TGFB1</i>	7

Hematologica I system development and function	Differentiation	Differentiation of Th2 cells	$5.04 \times 10^{-3}$	<i>GATA3, TGFB1</i>	2
Hematologica I system development and function	Differentiation	Differentiation of blood cells	$1.69 \times 10^{-2}$	<i>CDKN2A, CXCL12, GATA3, IFI16, IL18, MAFB, MUC1, MYB (includes EG:4602), TGFB1</i>	9
Hematologica I system development and function	Adhesion	Adhesion of lymphocytes	$1.07 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1, TGFB1</i>	6
Hematologica I system development and function	Adhesion	Adhesion of leukocytes	$1.19 \times 10^{-3}$	<i>ANXA1, CXCL12, FN1, ICAM1, ICAM2, PLTP, RASGRP1, RLN2, TGFB1</i>	9
Hematologica I system development and function	Adhesion	Adhesion of T lymphocytes	$2.12 \times 10^{-3}$	<i>CXCL12, FN1, ICAM1, ICAM2, RASGRP1</i>	5
Hematologica I system development and function	Adhesion	Adhesion of leukocyte cell lines	$1.34 \times 10^{-2}$	<i>ANXA1, TGFB1, TGM2</i>	3
Hematologica I system development and function	Development	T cell development	$1.70 \times 10^{-3}$	<i>CDKN2A, CXCL12, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	9
Hematologica I system development and function	Development	Development of blood cells	$2.13 \times 10^{-3}$	<i>CDKN2A, CXCL12, EGFR, GATA3, IL18, IL7R, MUC1, RAC2, TGFB1, TNFRSF6B</i>	10
Hematologica I system development and function	Apoptosis	Apoptosis of T lymphocytes	$2.71 \times 10^{-3}$	<i>CDKN2A, CXCL12, IL7R, RAC2, TGFB1, TNFRSF6B</i>	6
Hematologica I system development and function	Induction	Induction of T lymphocytes	$3.07 \times 10^{-3}$	<i>IL18, MUC1</i>	2

Hematological system development and function	Binding	Binding of blood platelets	$1.18 \times 10^{-2}$	<i>CD24, FN1, ICAM1</i>	3
Hematological system development and function	Proliferation	Proliferation of T lymphocytes	$1.28 \times 10^{-2}$	<i>CD24, CDKN2A, CXCL12, FN1, ICAM1, IL18, IL7R, TGFB1</i>	8
Hematological system development and function	Activation	Activation of leukocyte cell lines	$1.35 \times 10^{-2}$	<i>B2M, TNFRSF6B</i>	2
Hematological system development and function	Activation-induced cell death	Activation-induced cell death of T lymphocytes	$1.35 \times 10^{-2}$	<i>RAC2, TGFB1</i>	2
Hematological system development and function	Co-stimulation	Co-stimulation of T lymphocytes	$1.35 \times 10^{-2}$	<i>CD24, FN1</i>	2
Cellular assembly and organization	Organization	Organization of cytoskeleton	$3.23 \times 10^{-4}$	<i>CXCL12, FN1, FSCN1, ICAM1, PLS3, SDC2</i>	6
Cellular assembly and organization	Organization	Organization of actin cytoskeleton	$3.64 \times 10^{-3}$	<i>CXCL12, FN1, FSCN1, ICAM1</i>	4
Cellular assembly and organization	Rearrangement	Rearrangement of cytoskeleton	$9.96 \times 10^{-4}$	<i>CTGF, CXCL12, RET, TGFB1</i>	4
Cellular assembly and organization	Association	Association of cytoskeleton	$1.56 \times 10^{-3}$	<i>CXCL12, FXYD5</i>	2
Cellular assembly and organization	Formation	Formation of cell-matrix contacts	$1.56 \times 10^{-3}$	<i>CDH1, FN1</i>	2
Cellular assembly and organization	Formation	Formation of cellular inclusion bodies	$1.71 \times 10^{-2}$	<i>SNCA, WWOX</i>	2
Cellular assembly and organization	Quantity	Quantity of intercellular junctions	$1.56 \times 10^{-3}$	<i>CDH1, GDF15</i>	2

Cellular assembly and organization	Quantity	Quantity of neurites	$5.04 \times 10^{-3}$	<i>ESR1, SNCA</i>	2
Cellular assembly and organization	Quantity	Quantity of plasma membrane projections	$1.03 \times 10^{-2}$	<i>BST2, ESR1, SNCA</i>	3
Cellular assembly and organization	Development	Development of filaments	$7.45 \times 10^{-3}$	<i>CRYAB, TGFB1</i>	2
Connective tissue disorders	Connective tissue disorder	Connective tissue disorder	$3.55 \times 10^{-4}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL1A1, COL21A1, COL4A1, COL4A2, COL6A1, COL6A2, COMMD10, CRYAB, CXCL12, EFEMP2, ESR1, FN1, FYN, GALNT3, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	65
Connective tissue disorders	Dupuytren contracture	Dupuytren contracture	$1.20 \times 10^{-3}$	<i>COL1A1, COL21A1, COL4A1, COL4A2, COL6A1, COL6A2, MMP1 (includes EG:4312)</i>	7
Connective tissue disorders	Synovitis	Synovitis	$1.74 \times 10^{-3}$	<i>B2M, EFEMP2, TGFB1</i>	3
Connective tissue disorders	Rheumatic disease	Rheumatic disease	$2.20 \times 10^{-3}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL4A1, COL6A1, COMMD10, CRYAB, CXCL12, EFEMP2, ESR1, FN1, FYN, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	59
Connective tissue disorders	Arthritis	Arthritis	$2.23 \times 10^{-3}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL4A1, COL6A1, COMMD10, CRYAB, CXCL12, EFEMP2, FYN, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	57

Connective tissue disorders	Osteoarthritis	Osteoarthritis	$6.62 \times 10^{-3}$	<i>CRYAB, EFEMP2, IL18, MMP1</i> (includes <i>EG:4312</i> ), <i>TFPI2, TGFB1</i>	6
Skeletal and muscular disorders	Skeletal and muscular disorder	Skeletal and muscular disorder	$3.75 \times 10^{-4}$	<i>ABAT, ABCB1, AKAP2, AKT3, AREG, ATXN1, B2M, BCAT1, BDNF, BIN1, BTG3, C6ORF97, CA2, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, CDS1, COCH, COL1A1, COL4A1, COL6A1, COL6A2, COMMD10, CRYAB, CXCL12, DKK3, EFEMP2, EML1</i> (includes <i>EG:2009</i> ), <i>ESR1, FN1, FYN, GJA1, GLUL, GNAL, GPD1L, HIST1H2AC, HIST2H2AA3, HNMT, ICAM1, ID4, IL18, IL7R, IRS1, ISOC1, LAMB1, LDHB, LOX, MAP1B, MGP, MMP1</i> (includes <i>EG:4312</i> ), <i>MPPED2</i> (includes <i>EG:744</i> ), <i>MSX2, MT1E, MTUS1, NCOA3, NEBL, PBX1, PDCD10, PDLIM4, PIK3R3, PSMB9, PTPRK, RAI14, RAMP3, RB1, RCN1, S100P, SCD, SCHIP1, SCUBE2, SERPINA3, SERPINE1, SERTAD2, SGCE, SLC16A1, SLC24A3, SNCA, SRPX, STXBP6, TFPI2, TGFB1, TGM2, TPD52L1, TPM2, TUBB2A, TUBB2B, UBB, UBE2L6, UCHL1, VAV3, VIM, WWOX</i>	96
Skeletal and muscular disorders	Skeletal and muscular disorder	Skeletal and muscular disorder of humans	$9.99 \times 10^{-3}$	<i>ATXN1, BDNF, CRYAB, SNCA</i>	4
Skeletal and muscular disorders	Osteoporosis	Osteoporosis	$6.49 \times 10^{-4}$	<i>CA2, CALCR, COL1A1, ESR1, PDLIM4</i>	5
Skeletal and muscular disorders	Bethlem myopathy	Bethlem myopathy	$1.56 \times 10^{-3}$	<i>COL6A1, COL6A2</i>	2
Skeletal and muscular disorders	Ullrich congenital muscular dystrophy	Ullrich congenital muscular dystrophy	$1.56 \times 10^{-3}$	<i>COL6A1, COL6A2</i>	2
Skeletal and muscular disorders	Osteosarcoma	Osteosarcoma	$1.68 \times 10^{-3}$	<i>CDKN2A, FYN, RB1, SDC2, SPARC</i>	5
Skeletal and muscular disorders	Rheumatic disease	Rheumatic disease	$2.20 \times 10^{-3}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL4A1, COL6A1, COMMD10, CRYAB, CXCL12, EFEMP2, ESR1, FN1, FYN, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1</i> (includes <i>EG:4312</i> ), <i>MPPED2</i> (includes <i>EG:744</i> ), <i>MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	59

Skeletal and muscular disorders	Arthritis	Arthritis	$2.23 \times 10^{-3}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL4A1, COL6A1, COMMD10, CRYAB, CXCL12, EFEMP2, FYN, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	57
Skeletal and muscular disorders	Bone tumor	Bone tumor	$2.42 \times 10^{-3}$	<i>ADA, CDKN2A, EXT1, FYN, RB1, RET, SDC2, SPARC</i>	8
Skeletal and muscular disorders	Osteoarthritis	Osteoarthritis	$6.62 \times 10^{-3}$	<i>CRYAB, EFEMP2, IL18, MMP1 (includes EG:4312), TFPI2, TGFB1</i>	6
Skeletal and muscular disorders	Leiomyosarcoma	Leiomyosarcoma	$7.40 \times 10^{-3}$	<i>CDKN2A, FYN, HMGA1, RET</i>	4
Skeletal and muscular disorders	Progressive supranuclear palsy	Progressive supranuclear palsy	$9.07 \times 10^{-3}$	<i>ABAT, SERPINA3, TGM2, UBB</i>	4
Skeletal and muscular disorders	Myosarcoma	Myosarcoma	$1.06 \times 10^{-2}$	<i>CDKN2A, FYN, HMGA1, RET, TUBB2A</i>	5
Skeletal and muscular disorders	Chondrosarcoma	Chondrosarcoma	$1.35 \times 10^{-2}$	<i>EXT1, FYN</i>	2
Skeletal and muscular disorders	Postmenopausal osteoporosis	Postmenopausal osteoporosis	$1.35 \times 10^{-2}$	<i>CALCR, ESR1</i>	2
Inflammatory response	Migration	Migration of neutrophils	$3.97 \times 10^{-4}$	<i>ANXA1, FN1, ICAM1, SERPINE1, TGFB1</i>	5
Inflammatory response	Binding	Binding of blood platelets	$1.18 \times 10^{-2}$	<i>CD24, FN1, ICAM1</i>	3
Reproductive system development and function	Proliferation	Proliferation of breast cell lines	$4.02 \times 10^{-4}$	<i>CDH1, IGFBP3, LOX, TGFB1</i>	4
Reproductive system development and function	Morphology	Morphology of gonadal cell lines	$1.35 \times 10^{-2}$	<i>PEG10, SERPINE1</i>	2

Immunologic al disease	Immunodeficiency	Immunodeficiency	$4.78 \times 10^{-4}$	<i>ADA, B2M, IL7R, MLPH, RAC2, RASGRP1</i>	6
Immunologic al disease	Immunological disorder	Immunological disorder	$8.94 \times 10^{-3}$	<i>ABAT, ABCB1, ADA, ADCY1, AKAP2, ANK3, APPBP2, AREG, ATXN1, B2M, BCAT1, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, COL4A1, COMMD10, CXCL12, ESR1, FNDC3B, FYN, GFRA1, GLUL, GNA14, GNAL, GPD1L, GRHL2, HIST1H2AC, HIST1H4H (includes EG:8365), HNMT, ICAM1, IGFBP3, IL18, IL7R, IRS1, KRT7, LDHB, LOX, MLPH, MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, NRCAM, PBX1, PIK3R3, PSMB9, PTPRK, RAC2, RAI14, RASGRP1, RB1, RCN1, RET, SERPINA3, SERTAD2, SLC24A3, SNCA, SNRPN, STXBP6, TGFB1, TGM2, TNFRSF6B, TPD52L1, TPM2, TUBB2A, UBE2L6, VAV3, VIM, WNT5A, WWOX, ZNF395</i>	76
Behavior	Locomotion	Locomotion of eukaryotic cells	$5.28 \times 10^{-4}$	<i>CXCL12, TGFB1</i>	2
Gene expression	Bending	Bending of dna	$5.28 \times 10^{-4}$	<i>ESR1, TFF1</i>	2
Gene expression	Activation	Activation of ap1 response element	$9.15 \times 10^{-4}$	<i>ESR1, IL18, MMP1 (includes EG:4312)</i>	3
Gene expression	Activation	Activation of CAGA box	$7.45 \times 10^{-3}$	<i>CREBBP, TGFB1</i>	2
Gene expression	Activation	Activation of SMAD binding sequence	$1.03 \times 10^{-2}$	<i>TGFB1, TGFB1I1</i>	2
Gene expression	Activation	Activation of TGF- $\beta$ response element	$1.03 \times 10^{-2}$	<i>BMP7, TGFB1</i>	2
Gene expression	Expression	Expression of SP1 binding site	$4.47 \times 10^{-3}$	<i>ESR1, RB1, TGFB1</i>	3
Gene expression	Transcription	Transcription of chromatin templates	$5.04 \times 10^{-3}$	<i>CREBBP, ESR1</i>	2
Gene expression	Transcription	Transcription of AP1 consensus site	$1.03 \times 10^{-2}$	<i>ESR1, TGFB1</i>	2
Gene expression	Transcription	Transcription of TATA box	$1.35 \times 10^{-2}$	<i>ESR1, RB1</i>	2
Gene expression	Binding	Binding of AP1 consensus site	$1.18 \times 10^{-2}$	<i>CXCL12, GPX1, TGFB1</i>	3
Gene expression	Repression	Repression of gene	$1.55 \times 10^{-2}$	<i>ESR1, FHL2, FOXG1, RB1</i>	4

Nervous system development and function	Chemotaxis	Chemotaxis of granule cells	$5.28 \times 10^{-4}$	<i>BDNF, CXCL12</i>	2
Nervous system development and function	Chemotaxis	Chemotaxis of microglia	$5.04 \times 10^{-3}$	<i>TGFB1, TNFRSF6B</i>	2
Nervous system development and function	Quantity	Quantity of neuritis	$5.04 \times 10^{-3}$	<i>ESR1, SNCA</i>	2
Nervous system development and function	Length	Length of neuritis	$7.45 \times 10^{-3}$	<i>BDNF, ESR1</i>	2
Nervous system development and function	Development	Development of nervous system	$8.70 \times 10^{-3}$	<i>FOXP1, GSTP1, MAFB, PDGFC, SNCA, SOX3, ZIC1</i>	7
Metabolic disease	Light chain associated amyloidosis	Light chain-associated amyloidosis	$9.96 \times 10^{-4}$	<i>CXCL12, IGFBP5, RB1, TGFB1</i>	4
Metabolic disease	Gestational diabetes mellitus	Gestational diabetes mellitus	$7.45 \times 10^{-3}$	<i>IRS1, PIK3R1</i>	2
Metabolic disease	Diabetes	Diabetes of mice	$1.03 \times 10^{-2}$	<i>B2M, IGFBP3</i>	2
Carbohydrate metabolism	Synthesis	Synthesis of polysaccharide	$1.18 \times 10^{-3}$	<i>CTGF, EXT1, IGFBP3, IRS1, TGFB1, UGDH</i>	6
Carbohydrate metabolism	Synthesis	Synthesis of proteoglycan	$4.47 \times 10^{-3}$	<i>CTGF, EXT1, TGFB1</i>	3
Carbohydrate metabolism	Synthesis	Synthesis of carbohydrate	$6.28 \times 10^{-3}$	<i>CTGF, EXT1, IGFBP3, IRS1, TGFB1, UGDH, XBP1</i>	7
Carbohydrate metabolism	Accumulation	Accumulation of doxorubicin	$3.07 \times 10^{-3}$	<i>ABCB1, DNAJC15</i>	2
Carbohydrate metabolism	Release	Release of polysaccharide	$3.07 \times 10^{-3}$	<i>FN1, IL18</i>	2
Carbohydrate metabolism	Release	Release of carbohydrate	$7.62 \times 10^{-3}$	<i>ABCB1, FN1, IL18</i>	3

Carbohydrate metabolism	Metabolism	Metabolism of <i>N</i> -acetylglucosamine	$1.35 \times 10^{-2}$	<i>CHST6, EXTL2</i>	2
Embryonic development	Transdifferentiation	Transdifferentiation of mesenchymal cells	$1.56 \times 10^{-3}$	<i>COL4A1, TGFB1</i>	2
Embryonic development	Adhesion	Adhesion of embryonic cell lines	$5.41 \times 10^{-3}$	<i>FN1, ICAM1, RRAS</i>	3
Embryonic development	Apoptosis	Apoptosis of embryonic cells	$1.03 \times 10^{-2}$	<i>BMP7, TNFRSF6B</i>	2
Embryonic development	Morphology	Morphology of embryonic cell lines	$1.35 \times 10^{-2}$	<i>IGFBP3, SERPINE1</i>	2
Inflammatory disease	Adult onset still's disease	Adult-onset Stills disease	$1.56 \times 10^{-3}$	<i>ICAM1, IL18</i>	2
Inflammatory disease	Synovitis	Synovitis	$1.74 \times 10^{-3}$	<i>B2M, EFEMP2, TGFB1</i>	3
Inflammatory disease	Rheumatic disease	Rheumatic disease	$2.20 \times 10^{-3}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL4A1, COL6A1, COMMD10, CRYAB, CXCL12, EFEMP2, ESR1, FN1, FYN, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	59
Inflammatory disease	Arthritis	Arthritis	$2.23 \times 10^{-3}$	<i>ABCB1, AKAP2, AREG, B2M, BCAT1, BDNF, BTG3, C6ORF97, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COL4A1, COL6A1, COMMD10, CRYAB, CXCL12, EFEMP2, FYN, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IL18, IL7R, IRS1, LDHB, LOX, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, NCOA3, NEBL, PBX1, PIK3R3, PTPRK, RB1, RCN1, SERPINA3, SERTAD2, SLC24A3, SNCA, STXBP6, TFPI2, TGFB1, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX</i>	57
Inflammatory disease	Osteoarthritis	Osteoarthritis	$6.62 \times 10^{-3}$	<i>CRYAB, EFEMP2, IL18, MMP1 (includes EG:4312), TFPI2, TGFB1</i>	6

Inflammatory disease	Inflammatory disorder	Inflammatory disorder	$8.03 \times 10^{-3}$	<i>ABCB1, ADA, AKAP2, AREG, ATXN1, B2M, BCAS3, BCAT1, BDNF, BTG3, C6ORF97, CA2, CALCR, CALD1, CD24, CDA, CDH1, CDH2, CDKN2A, COCH, COL4A1, COL4A2, COL6A1, COMMD10, CREBBP, CRYAB, CXCL12, DKK3, EFEMP2, EGFR, EML1 (includes EG:2009), ESR1, FN1, FYN, GATA3, GFRA1, GLUL, GPD1L, HIST1H2AC, HNMT, ICAM1, IGFBP3, IL18, IL7R, IRS1, KYNU, LDHB, LEPREL1, LOX, LPHN2, MMP1 (includes EG:4312), MPPED2 (includes EG:744), MTUS1, MUC1, NCOA3, NEBL, ORC5L, PBX1, PIK3R3, PTPRK, PTRF, RB1, RBM47, RCN1, SELENBP1, SERPINA3, SERPINB7, SERPINE1, SERPINE2, SERTAD2, SIDT1, SLC24A3, SNCA, SNRPN, STXBP6, TFPI2, TGFB1, TNFRSF6B, TPD52L1, TPM2, TUBB2A, UBB, UBE2L6, VAV3, VIM, WWOX, ZNF395</i>	87
Respiratory system development and function	S phase	Entry into S phase of lung cell lines	$1.56 \times 10^{-3}$	<i>CDKN2A, NCOA3</i>	2
Respiratory system development and function	Proliferation	Proliferation of lung cell lines	$2.28 \times 10^{-3}$	<i>CDKN2A, FN1, IFI16</i>	3
Skeletal and muscular system development and function	Activation	Activation of muscle cells	$1.56 \times 10^{-3}$	<i>TGFB1, TGM2</i>	2
Skeletal and muscular system development and function	Ossification	Ossification	$4.15 \times 10^{-3}$	<i>BMP7, EXT1, MGP, SPARC</i>	4
Skeletal and muscular system development and function	Differentiation	Differentiation of muscle cells	$1.34 \times 10^{-2}$	<i>IGFBP3, RB1, TGFB1</i>	3
Nucleic acid metabolism	Incorporation	Incorporation of thymidine	$2.12 \times 10^{-3}$	<i>CDKN2A, EGFR, FN1, IGFBP5, TGFB1</i>	5
Small molecule biochemistry	Incorporation	Incorporation of thymidine	$2.12 \times 10^{-3}$	<i>CDKN2A, EGFR, FN1, IGFBP5, TGFB1</i>	5

Small molecule biochemistry	Metabolism	Metabolism of steroid	$2.91 \times 10^{-3}$	<i>AKR1C2, UGT2B15, WWOX</i>	3
Small molecule biochemistry	Metabolism	Metabolism of <i>N</i> -acetylglucosamine	$1.35 \times 10^{-2}$	<i>CHST6, EXTL2</i>	2
Small molecule biochemistry	Accumulation	Accumulation of doxorubicin	$3.07 \times 10^{-3}$	<i>ABCB1, DNAJC15</i>	2
Small molecule biochemistry	Synthesis	Synthesis of proteoglycan	$4.47 \times 10^{-3}$	<i>CTGF, EXT1, TGFB1</i>	3
Small molecule biochemistry	Quantity	Quantity of eicosanoid	$1.52 \times 10^{-2}$	<i>EGFR, IL18, TGFB1</i>	3
Auditory disease	Nonsyndromic hearing impairment	Nonsyndromic hearing impairment	$2.28 \times 10^{-3}$	<i>COCH, DFNA5, GRHL2</i>	3
Lipid metabolism	Metabolism	Metabolism of steroid	$2.91 \times 10^{-3}$	<i>AKR1C2, UGT2B15, WWOX</i>	3
Lipid metabolism	Quantity	Quantity of eicosanoid	$1.52 \times 10^{-2}$	<i>EGFR, IL18, TGFB1</i>	3
Drug metabolism	Accumulation	Accumulation of doxorubicin	$3.07 \times 10^{-3}$	<i>ABCB1, DNAJC15</i>	2
Molecular transport	Accumulation	Accumulation of doxorubicin	$3.07 \times 10^{-3}$	<i>ABCB1, DNAJC15</i>	2
Molecular transport	Uptake	Uptake of phosphate	$3.07 \times 10^{-3}$	<i>STC1, TGFB1</i>	2
Molecular transport	Quantity	Quantity of eicosanoid	$1.52 \times 10^{-2}$	<i>EGFR, IL18, TGFB1</i>	3
Ophthalmic disease	Gelatinous drop-like corneal dystrophy	Gelatinous drop-like corneal dystrophy	$3.07 \times 10^{-3}$	<i>TACSTD2, TGFB1</i>	2
Organismal survival	Survival	Survival of humans	$4.70 \times 10^{-3}$	<i>EGFR, HMGA2, MYB (includes EG:4602), SERPINE1</i>	4
Cell signaling	Insulin-like growth factor receptor signaling pathway	Insulin-like growth factor receptor signaling pathway	$5.04 \times 10^{-3}$	<i>IRS1, PIK3R1</i>	2

Hair and skin development and function	Cytostasis	Cytostasis of epithelial cell lines	$5.04 \times 10^{-3}$	<i>EGFR, TGFB1</i>	2
Hair and skin development and function	Proliferation	Proliferation of epidermal cells	$6.46 \times 10^{-3}$	<i>EGFR, PTPRK, TGFB1</i>	3
Hair and skin development and function	Differentiation	Differentiation of keratinocytes	$6.65 \times 10^{-3}$	<i>ANXA1, CDH1, FN1, TGFB1</i>	4
Hair and skin development and function	Adhesion	Adhesion of keratinocytes	$1.71 \times 10^{-2}$	<i>CDH1, FN1</i>	2
Endocrine system disorders	Gestational diabetes mellitus	Gestational diabetes mellitus	$7.45 \times 10^{-3}$	<i>IRS1, PIK3R1</i>	2
Endocrine system disorders	Diabetes	Diabetes of mice	$1.03 \times 10^{-2}$	<i>B2M, IGFBP3</i>	2
Hematological disease	Hematological disorder	Hematological disorder	$9.69 \times 10^{-3}$	<i>ADA, AKT3, B2M, BCAT1, BRIP1, CALCR, CALD1, COL4A1, CREBBP, CTGF, CXCL12, DUSP4, EGFR, ESR1, FN1, FYN, ICAM1, IGFBP3, IL7R, ORC5L, RET, SERPINE1, TGFB1</i>	23
Renal and urological disease	Renal cancer	Renal cancer	$9.69 \times 10^{-3}$	<i>ABCB1, CDH1, EGFR, EPCAM, FN1, IL7R, RB1, RET, TUBB2A</i>	9
Renal and urological disease	Renal-cell carcinoma	Renal-cell carcinoma	$1.35 \times 10^{-2}$	<i>ABCB1, CDH1, EGFR, FN1, RB1, RET, TUBB2A</i>	7
Renal and urological system development and function	Activation	Activation of kidney cell lines	$1.03 \times 10^{-2}$	<i>TGFB1, TGM2</i>	2
Protein synthesis	Expression	Expression of protein	$1.06 \times 10^{-2}$	<i>EGFR, EIF5A, FN1, PAIP1, TGFB1</i>	5
Free radical scavenging	Generation	Generation of reactive oxygen species	$1.10 \times 10^{-2}$	<i>CRYAB, GPX1, MUC1, TGFB1</i>	4
Post-translational modification	Acetylation	Acetylation of protein	$1.71 \times 10^{-2}$	<i>CREBBP, SNCA</i>	2

\* EG = Entrez Gene number.

†Function is defined as the cellular, physiological, or disease process associated with the gene(s) displayed. Functional annotation was provided by Ingenuity Pathway Analysis software (Redwood City, CA). No. of molecules indicates the number of genes from our dataset that have the function listed.

‡ Ingenuity Pathways Analysis software (Redwood City, CA) was used to determine which biological relationships exist between the genes present in Supplementary Tables 1 and 2. The reference set for this analysis was the Ingenuity Knowledge Base (Genes only), and the network analysis was set to direct relationships. All data sources were used to obtain data from patients and all human cell lines and tissues. The stringent filter was also used. Seventy molecules per network and 25 networks were used for this analysis. The p-value associated with Functional Analysis for a dataset was calculated using the Fisher Exact Test. All statistical tests were two-sided.