

Table SI. Downregulated differentially expressed genes identified in lung adenocarcinomas.

Gene symbol	Gene name
HEG1	Heart development protein with EGF like domains 1
LIMS2	LIM zinc finger domain containing 2
GRK5	G protein-coupled receptor kinase 5
TNXB///TNXA	Tenascin XB///tenascin XA (pseudogene)
OLFML1	Olfactomedin like 1
HSPA12B	Heat shock protein family A (Hsp70) member 12B
CYYR1	Cysteine and tyrosine rich 1
CCDC102B	Coiled-coil domain containing 102B
DOK6	Docking protein 6
GIMAP1	GTPase, IMAP family member 1
LIMCH1	LIM and calponin homology domains 1
NEBL	Nebulette
WWC2///CLDN22	WW and C2 domain containing 2///claudin 22
DACH1	Dachshund family transcription factor 1
PTPN21	Protein tyrosine phosphatase, non-receptor type 21
SYNM	Synemin
SLC39A8	Solute carrier family 39 member 8
RECK	Reversion inducing cysteine rich protein with kazal motifs
EMP2	Epithelial membrane protein 2
AFAP1L1	Actin filament associated protein 1 like 1
NEXN	Nexilin F-actin binding protein
ITM2A	Integral membrane protein 2A
SMAD6	SMAD family member 6
LAMP3	Lysosomal associated membrane protein 3
GNLY	Granulysin
QKI	QKI, KH domain containing RNA binding
PKNOX2	PBX/knotted 1 homeobox 2
FPR2	Formyl peptide receptor 2
SH2D3C	SH2 domain containing 3C
SH3GL3	SH3 domain containing GRB2 like 3, endophilin A3
SHANK3	SH3 and multiple ankyrin repeat domains 3
ECSCR	Endothelial cell surface expressed chemotaxis and apoptosis regulator
TMEM204	Transmembrane protein 204
TRHDE	Thyrotropin releasing hormone degrading enzyme
KIAA1462	KIAA1462
ITIH5	Inter-alpha-trypsin inhibitor heavy chain family member 5
PCDH9	Protocadherin 9
FGFR4	Fibroblast growth factor receptor 4
CLEC14A	C-type lectin domain family 14 member A
CD93	CD93 molecule
STARD13	StAR related lipid transfer domain containing 13
MMRN2	Multimerin 2
SLC5A9	Solute carrier family 5 member 9
TBX3	T-box 3
CLEC1A	C-type lectin domain family 1 member A
SMAD9	SMAD family member 9
JAM2	Junctional adhesion molecule 2
P2RY1	Purinergic receptor P2Y1
ANGPTL1	Angiopoietin like 1
CSRNP1	Cysteine and serine rich nuclear protein 1
ATOH8	Atonal bHLH transcription factor 8
VGLL3	Vestigial like family member 3
CCBE1	Collagen and calcium binding EGF domains 1
ERG	ERG, ETS transcription factor
PPP1R14A	Protein phosphatase 1 regulatory inhibitor subunit 14A
AKAP12	A-kinase anchoring protein 12
NEDD4L	Neural precursor cell expressed, developmentally down-regulated 4-like, E3 ubiquitin protein ligase
TTN	Titin

Table SI. Continued.

Gene symbol	Gene name
THBD	Thrombomodulin
NOSTRIN	Nitric oxide synthase trafficking
FEZ1	fasciculation and elongation protein zeta 1
FENDRR	FOXF1 adjacent non-coding developmental regulatory RNA
FAM189A2	Family with sequence similarity 189 member A2
AOX1	Aldehyde oxidase 1
PEAR1	Platelet endothelial aggregation receptor 1
FAM46B	Family with sequence similarity 46 member B
EPAS1	Endothelial PAS domain protein 1
ACE	Angiotensin I converting enzyme
GUCY1A2	Guanylate cyclase 1 soluble subunit alpha 2
ITGA8	Integrin subunit alpha 8
CCM2L	CCM2 like scaffolding protein
EML1	Echinoderm microtubule associated protein like 1
NTNG1	Netrin G1
FXYD1	FXYD domain containing ion transport regulator 1
LOC101060604///SLC7A5P2///SLC7A5P1	Putative L-type amino acid transporter 1-like protein IMAA///solute carrier family 7 member 5 pseudogene 2///solute carrier family 7 member 5 pseudogene 1
ADGRL3	Adhesion G protein-coupled receptor L3
TIE1	Tyrosine kinase with immunoglobulin like and EGF like domains 1
DLC1	DLC1 Rho GTPase activating protein
LINC00312	Long intergenic non-protein coding RNA 312
ITGA1	Integrin subunit alpha 1
HIGD1B	HIG1 hypoxia inducible domain family member 1B
ST6GALNAC5	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 5
MASP1	Mannan binding lectin serine peptidase 1
PALM2-AKAP2///AKAP2	PALM2-AKAP2 readthrough///A-kinase anchoring protein 2
TBX5-AS1	TBX5 antisense RNA 1
FRMD3	FERM domain containing 3
APOLD1	Apolipoprotein L domain containing 1
TOX2	TOX high mobility group box family member 2
SOX17	SRY-box 17
NKG7	Natural killer cell granule protein 7
WISP2	WNT1 inducible signaling pathway protein 2
LIFR	Leukemia inhibitory factor receptor alpha
SCN7A	Sodium voltage-gated channel alpha subunit 7
SEMA5A	Semaphorin 5A
PCAT19	Prostate cancer associated transcript 19 (non-protein coding)
GPR146	G protein-coupled receptor 146
NDRG4	NDRG family member 4
RAMP2	Receptor activity modifying protein 2
CRYAB	Crystallin alpha B
SVEP1	Sushi, von Willebrand factor type A, EGF and pentraxin domain containing 1
SEMA6A	Semaphorin 6A
CAV2	Caveolin 2
NPNT	Nephronectin
KLRF1	Killer cell lectin like receptor F1
SRPX	Sushi repeat containing protein, X-linked
ADARB1	Adenosine deaminase, RNA specific B1
RHOJ	Ras homolog family member J
TMEM178A	Transmembrane protein 178A
GIMAP6	GTPase, IMAP family member 6
NRN1	Neuritin 1
PECAM1	Platelet and endothelial cell adhesion molecule 1
RASIP1	Ras interacting protein 1
TMTC1	Transmembrane and tetratricopeptide repeat containing 1
MYCT1	Myc target 1
VWF	von Willebrand factor

Table SI. Continued.

Gene symbol	Gene name
DNASE1L3	Deoxyribonuclease 1 like 3
SLC19A3	Solute carrier family 19 member 3
ANXA8L1///ANXA8	Annexin A8-like 1///annexin A8
ABI3BP	ABI family member 3 binding protein
FGF2	Fibroblast growth factor 2
PDE5A	Phosphodiesterase 5A
S1PR1	Sphingosine-1-phosphate receptor 1
RXFP1	Relaxin/insulin like family peptide receptor 1
LEPROT///LEPR	Leptin receptor overlapping transcript///leptin receptor
SOCS2	Suppressor of cytokine signaling 2
SLIT2	Slit guidance ligand 2
PLAC9	Placenta specific 9
EMCN	Endomucin
ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif 1
FAM162B	Family with sequence similarity 162 member B
CALCRL	Calcitonin receptor like receptor
PIP5K1B	Phosphatidylinositol-4-phosphate 5-kinase type 1 beta
PGM5	Phosphoglucomutase 5
STX11	Syntaxin 11
ARHGEF26	Rho guanine nucleotide exchange factor 26
ANGPT1	Angiopoietin 1
ACVRL1	Activin A receptor like type 1
SEMA6D	Semaphorin 6D
VIPR1	Vasoactive intestinal peptide receptor 1
BTNL9	Butyrophilin like 9
ASPA	Aspartoacylase
HBA2///HBA1	Hemoglobin subunit alpha 2///hemoglobin subunit alpha 1
AOC3	Amine oxidase, copper containing 3
FHL5	Four and a half LIM domains 5
CFD	Complement factor D
RAMP3	Receptor (G protein-coupled) activity modifying protein 3
ADGRL2	Adhesion G protein-coupled receptor L2
LOC100653057///CES1	Liver carboxylesterase 1-like///carboxylesterase 1
PTPRB	Protein tyrosine phosphatase, receptor type B
RNF182	Ring finger protein 182
HBB	Hemoglobin subunit beta
GHR	Growth hormone receptor
BDNF	Brain derived neurotrophic factor
MARCO	Macrophage receptor with collagenous structure
MFAP4	Microfibrillar associated protein 4
TGFBR3	Transforming growth factor beta receptor 3
LPL	Lipoprotein lipase
AGTR1	Angiotensin II receptor type 1
ARHGAP6	Rho GTPase activating protein 6
CDH5	Cadherin 5
CXCR2	C-X-C motif chemokine receptor 2
CDH19	Cadherin 19
KANK3	KN motif and ankyrin repeat domains 3
LDB2	LIM domain binding 2
TCF21	Transcription factor 21
KCNT2	Potassium sodium-activated channel subfamily T member 2
GNG11	G protein subunit gamma 11
FMO2	Flavin containing monooxygenase 2
RGCC	Regulator of cell cycle
DPP6	Dipeptidyl peptidase like 6
GIMAP8	GTPase, IMAP family member 8
GPM6B	Glycoprotein M6B
CLIC5	Chloride intracellular channel 5
FAT3	FAT atypical cadherin 3

Table SI. Continued.

Gene symbol	Gene name
KL	Klotho
KLF4	Kruppel like factor 4
SGCG	Sarcoglycan gamma
SPOCK2	Sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 2
CLDN5	Claudin 5
ADRA1A	Adrenoceptor alpha 1A
ACADL	Acyl-CoA dehydrogenase, long chain
ANOS1	Anosmin 1
SCN4B	Sodium voltage-gated channel beta subunit 4
SPTBN1	Spectrin beta, non-erythrocytic 1
TAL1	TAL bHLH transcription factor 1, erythroid differentiation factor
MME	Membrane metallo-endopeptidase
GDF10	Growth differentiation factor 10
PCOLCE2	Procollagen C-endopeptidase enhancer 2
SEMA3G	Semaphorin 3G
ROBO4	Roundabout guidance receptor 4
KCNK3	Potassium two pore domain channel subfamily K member 3
LRRN3	Leucine rich repeat neuronal 3
STXBP6	Syntaxin binding protein 6
CD300LG	CD300 molecule like family member g
FIBIN	Fin bud initiation factor homolog (zebrafish)
SOX7	SRY-box 7
MS4A15	Membrane spanning 4-domains A15
FHL1	Four and a half LIM domains 1
IGSF10	Immunoglobulin superfamily member 10
ABCA8	ATP binding cassette subfamily A member 8
CCDC85A	Coiled-coil domain containing 85A
ANKRD29	Ankyrin repeat domain 29
ADAMTS8	ADAM metallopeptidase with thrombospondin type 1 motif 8
GRIA1	Glutamate ionotropic receptor AMPA type subunit 1
ADH1B	Alcohol dehydrogenase 1B (class I), beta polypeptide
ADAMTSL3	ADAMTS like 3
TEK	TEK receptor tyrosine kinase
CAV1	Caveolin 1
LIN7A	Lin-7 homolog A, crumbs cell polarity complex component
FAM107A	Family with sequence similarity 107 member A
GPIHBP1	Glycosylphosphatidylinositol anchored high density lipoprotein binding protein 1
CDO1	Cysteine dioxygenase type 1
LINC00968	Long intergenic non-protein coding RNA 968
FOXF1	Forkhead box F1
AFF3	AF4/FMR2 family member 3
COL6A6	Collagen type VI alpha 6 chain
FGFBP2	Fibroblast growth factor binding protein 2
PDK4	Pyruvate dehydrogenase kinase 4
MAMDC2	MAM domain containing 2
ADIRF	Adipogenesis regulatory factor
MYZAP	Myocardial zonula adherens protein
SERTM1	Serine rich and transmembrane domain containing 1
PPBP	Pro-platelet basic protein
SLC6A4	Solute carrier family 6 member 4
CA4	Carbonic anhydrase 4
LYVE1	Lymphatic vessel endothelial hyaluronan receptor 1
BCHE	Butyrylcholinesterase
SDPR	Serum deprivation response
FAM150B	Family with sequence similarity 150 member B
MCEMP1	Mast cell expressed membrane protein 1
ADRB1	Adrenoceptor beta 1
EDNRB	Endothelin receptor type B

Table SI. Continued.

Gene symbol	Gene name
PIR-FIGF///FIGF	PIR-FIGF readthrough///c-fos induced growth factor
IL6	Interleukin 6
CD36	CD36 molecule
TNNC1	Troponin C1, slow skeletal and cardiac type
EXOSC7///CLEC3B	Exosome component 7///C-type lectin domain family 3 member B
NCKAP5	NCK associated protein 5
MT1M	Metallothionein 1M
RTKN2	Rhotekin 2
FABP4	Fatty acid binding protein 4
CLDN18	Claudin 18
GPM6A	Glycoprotein M6A
SOSTDC1	Sclerostin domain containing 1
AGER	Advanced glycosylation end-product specific receptor
TMEM100	Transmembrane protein 100
FCN3	Ficolin 3

Table SII. Upregulated differentially expressed genes identified in lung adenocarcinomas.

Gene symbol	Gene name
SPP1	Secreted phosphoprotein 1
COL10A1	Collagen type X alpha 1 chain
HS6ST2	Heparan sulfate 6-O-sulfotransferase 2
TOX3	TOX high mobility group box family member 3
TOP2A	Topoisomerase (DNA) II alpha
CP	Ceruloplasmin (ferroxidase)
CST1	Cystatin SN
AFAP1-AS1	AFAP1 antisense RNA 1
CTHRC1	Collagen triple helix repeat containing 1
ANLN	Anillin actin binding protein
COMP	Cartilage oligomeric matrix protein
PROM2	Prominin 2
ABCC3	ATP binding cassette subfamily C member 3
CD24	CD24 molecule
GCNT3	Glucosaminyl (N-acetyl) transferase 3, mucin type
LRRC31	Leucine rich repeat containing 31
RRM2	Ribonucleotide reductase regulatory subunit M2
XDH	Xanthine dehydrogenase
LINC00673///LINC00511	Long intergenic non-protein coding RNA 673///long intergenic non-protein coding RNA 511
ST6GALNAC1	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 1
UHRF1	Ubiquitin like with PHD and ring finger domains 1
KIAA0101	KIAA0101
PLPP2	Phospholipid phosphatase 2
PSAT1	Phosphoserine aminotransferase 1
C1orf53	Chromosome 1 open reading frame 53
GOLM1	Golgi membrane protein 1
FUT2	Fucosyltransferase 2
KIF20A	Kinesin family member 20A
HMMR	Hyaluronan mediated motility receptor
UNC5CL	Unc-5 family C-terminal like
UBE2T	Ubiquitin conjugating enzyme E2 T
AGR2	Anterior gradient 2, protein disulphide isomerase family member
OCIAD2	OCIA domain containing 2
ZWINT	ZW10 interacting kinetochore protein
LGR4	Leucine rich repeat containing G protein-coupled receptor 4
SRD5A1	Steroid 5 alpha-reductase 1
CENPF	Centromere protein F
KIF26B	Kinesin family member 26B
BUB1	BUB1 mitotic checkpoint serine/threonine kinase
C1orf106	Chromosome 1 open reading frame 106
CDH3	Cadherin 3
WFDC2	WAP four-disulfide core domain 2
HMGB3	High mobility group box 3
NUSAP1	Nucleolar and spindle associated protein 1
KCNK5	Potassium two pore domain channel subfamily K member 5
FERMT1	Fermitin family member 1
ETV4	ETS variant 4
BLACAT1	Bladder cancer associated transcript 1 (non-protein coding)
EFNA4	Ephrin A4
HKDC1	Hexokinase domain containing 1
BCL2L15	BCL2 like 15
EPHX3	Epoxide hydrolase 3
F2RL1	F2R like trypsin receptor 1
TMEM45B	Transmembrane protein 45B
MANEAL	Mannosidase endo-alpha like
SLC22A18	Solute carrier family 22 member 18