SUPPLEMENTARY TABLES

Table S1. Alteration of ZNF322A protein expression levels in relation to clinicopathological parameters in 123 Asian and 74 Caucasian lung cancer patients.

	Asian patients			Caucasian patients		
	Overexpression	Normal expression		Overexpression	Normal expression	
	97 (78.9%)	26 (21.1%)		54 (72.9%)	20 (27.1%)	
Characteristics	N (%)	N (%)	*P*-value[a]	N (%)	N (%)	*P*-value[a]
Age						
<60	48 (75.0)	16 (25.0)	0.377	28 (70.0)	12 (30.0)	0.792
≥60	49 (83.1)	10 (16.9)		24 (75.0)	8 (25.0)	
Sex						
Male	56 (82.4)	12 (17.6)	0.375	32 (78.0)	9 (22.0)	0.303
Female	41 (74.5)	14 (25.5)		22 (66.7)	11 (33.3)	
Smoke						
Yes	39 (75.0)	13 (25.0)	0.479	28 (82.4)	6 (17.6)	0.477
No	39 (81.2)	9 (18.8)		2 (66.7.0)	1 (33.3)	
Tumor type[b]						
ADC	68 (78.2)	19 (21.8)	0.609	17 (81.0)	4 (19.0)	1.000[c]
SCC	26 (83.9)	5 (16.1)		22 (84.6)	4 (15.4)	
Large cell	-	-		12 (50.0)	12 (50.0)	
Tumor stage						
I & II	56 (74.7)	19 (25.3)	0.256	29 (67.4)	14 (32.6)	0.298
III & IV	38 (84.4)	7 (15.6)		23 (79.3)	6 (20.7)	

[a] The data were analyzed by Pearson χ^2 test.

[b] ADC, adenocarcinoma; SCC, squamous cell carcinoma.

[c] *P* value was analyzed for ADC vs. SCC.

Table S2. The 1,108 proteins, identified with high confidence in two independent experiments (experiment 1 and 2), by iTRAQ quantitative proteomic analysis on total cell lysate taken from control and si-ZNF322A expressing A549 cells. Provided as a separate Excel file.

Our ZNF322A proteomic data has been submitted to ProteomeXchange Consortium with accession number PXD001123 (Reviewer link via http://tinyurl.com/oh2gxg7. Login information is listed as follows: Username: reviewer21585@ebi.ac.uk; Password: i7JiUVJA).

Table S3. The primers used in the current study.

Gene	Primer	Sequences (5'→ 3')	Application[a]	PCR size (bp)	Tm (°C)
GAPDH mRNA	Forward	GAG TCA ACG GAT TTG GTC GT	qRT-PCR	238	60
	Reverse	TTG ATT TTG GAG GGA TCT CG			
ZNF322A mRNA	Forward	GTG GTC TGC GTG TGA GAG TGG C	qRT-PCR	226	60
	Reverse	TTC TGA CGC ATG GGG AGG GCT			
ADD1 mRNA	Forward	TCC CAG GTT TTG TGT GGT GTA GT	qRT-PCR	150	60
	Reverse	ACG GTC TGT GAG TGT GGT GAA G			
CCND1 mRNA	Forward	AAC TAC CTG GAC CGC TTC CT	qRT-PCR	204	60
	Reverse	CCA CTT GAG CTT GTT CAC CA			
p53 mRNA	Forward	GTG GAA GGA AAT TTG CGT GT	qRT-PCR	184	60
	Reverse	CCA GTG TGA TGA TGG TGA GG			
ADD1 AP1-2	Forward	GCT GCA GTG AGC CAT GGT T	ChIP-qPCR	180	60
	Reverse	TAT ATA CCC CAA AGA AAT GAA AAC AGC TA			
CCND1 AP1-1	Forward	GCC CAT TCT GCC GGC TTG GA	ChIP-qPCR	132	60
	Reverse	GGG GTG AGG TGG AGG TGG CT			
CCND1 AP1-2	Forward	TGA AGG GAC GTC TAC ACC CC	ChIP-qPCR	250	60
	Reverse	CTG CCT TCC TAC CTT GAC CA			
p53 AP-1	Forward	GCA CCA GGT CGG CGA GAA TCC	ChIP-qPCR	131	60
	Reverse	TGC GAG GCT CCT GGC ACA AA			
ADD1 promoter	Forward	GCG CAC GCG TAC AGG CAA GAG CCA CCA C	Construction	--[b]	72
	Reverse	GCG CAG ATC TCT TAG GGA GGC AGA AAC AGG AGG			

Gene	Primer	Sequences (5'→ 3')	Application[a]	PCR size (bp)	Tm (°C)
CCND1 promoter	Forward	GCG CGG TAC CCT ACA CCC CCA ACA AAA CCA	Construction	--[b]	61
	Reverse	GGA CCC ACA GCC CTC CCC AGA GAT CTG CGC			
ADD1	Forward	CAG GGT CTC CTT ATG TTG TCC GGT TAA GTC TGC C	Site-direct	--[b]	71
AP1-1 site mutant	Reverse	GGC AGA CTT AAC CGG ACA ACA TAA GGA GAC CCT G	mutagenesis		
ADD1	Forward	GCG ACA GAG ACC CTG GCT TCA AAA AAA AAA AAA AA	Site-direct	--[b]	71
AP1-2 site mutant	Reverse	TTT TTT TTT TTT TTT GAA GCC AGG GTC TCT GTC GC	mutagenesis		
ADD1	Forward	CTG TCT CTC TGA ATT TGG CTG CTC TAG ACA CCT CAT ACA	Site-direct	--[b]	71
AP1-3 site mutant	Reverse	TGT ATG AGG TGT CTA GAG CAG CCA AAT TCA GAG AGA CAG	mutagenesis		
ADD1	Forward	TTC ATA TTA TTG TTC GGT TAT CAC CAC CAT CC	Site-direct	--[b]	65
AP1-4 site mutant	Reverse	GGA TGG TGG TGA TAA CCG AAC AAT AAT ATG AA	mutagenesis		
CCND1	Forward	GGT GTC GCC GCG CCC CGG TTA CCC CTT CTC GTG	Site-direct	--[b]	65
AP1-1 site mutant	Reverse	CAC GAG AAG GGG TAA CCG GGG CGC GGC GAC ACC	mutagenesis		
CCND1	Forward	AAA AAA AAT GGG TTA GAA TGG AGA TCA C	Site-direct	--[b]	50
AP1-2 site mutant	Reverse	GTG ATC TCC ATT CTA ACC ACT TTT TTT T	mutagenesis		
p53	Forward	GAG GAG GGT GCA TAG CCA GGA TTC TCG C	Site-direct	--[b]	61
AP-1 site mutant	Reverse	GCG AGA ATC CTG GCT ATG CAC CCT CCT C	mutagenesis		
p53	Forward	AAG ACC TGC CCT GTG	Sequencing	765	60
sequencing primer	Reverse	GTC TGA GTC AGG CCC TTC			

[a] qRT-PCR, quantitative reverse-transcriptase polymer chain reaction; ChIP-qPCR, quantitative chromatin-immunoprecipitation coupled with polymer chain reaction.

[b] --, Not applicable.

Table S4. Antibodies and their reaction conditions used in the current study.

Target	KD	Raised In	Application	Dilution	Source	Catalog No.
ZNF322A	44	Rabbit	IHC Western blot ChIP IP	1:400 1:1000 1:50 1:50	LifeSpan	LS-C30280
c-Jun	39	Rabbit	ChIP IP	1:50 1:50	Abcam	ab-31419
CCND1	36	Rabbit	IHC Western blot	1:300 1:1000	Epitomics	2261-1
p53	53	Mouse	IHC Western blot	1:400 1:1000	Santa Cruz	sc-126
ADD1	81	Rabbit	IHC Western blot	1:500 1:1000	GeneTex	GTX101600
VPS25	21	Rabbit	Western blot	1:1000	GeneTex	GTX108088
PGM2	68	Rabbit	Western blot	1:300	GeneTex	GTX119168
KIAA0090	112	Rabbit	Western blot	1:1000	GeneTex	GTX119884
MCM2	102	Rabbit	Western blot	1:1000	GeneTex	GTX103071

Target	KD	Raised In	Application	Dilution	Source	Catalog No.
NSDHL	42	Rabbit	Western blot	1:1000	GeneTex	GTX115995
BTF3	22	Rabbit	Western blot	1:500	GeneTex	GTX101462
RAD23B	43	Rabbit	Western blot	1:1000	GeneTex	GTX103424
CPNE1	59	Rabbit	Western blot	1:1000	GeneTex	GTX101441
AP1G1	91	Rabbit	Western blot	1:1000	GeneTex	ZF127128
H3ac	16	Rabbit	ChIP	1:50	Millipore	06-599
HDAC3	49	Rabbit	ChIP	1:50	Cell signaling	Sc-11417
β-actin	42	Mouse	Western blot	1:5000	Novus Biologicals	NB 600-501
HA-tag (ZNF322A)	–[a]	Rabbit	ChIP IP Western blot	1:50 1:50 1:1000	GeneTex	GTX29110

[a] –, Molecular weight is not applicable.

Table S5. The plasmids and their characteristics used in the current study.

Plasmid	Target	Insert (bp)	Function	Source
pCMV-HA	None	–[a]	Vector control	Homemade
HA-ZNF322A	Wild type ZNF322A	1083	Overexpression	Homemade
Flag	None	–[a]	Vector control	From Dr. B-K Chen[b]
c-Jun-Flag	Wild type c-Jun	1212	Overexpression	From Dr. B-K Chen[b]
pCMV-3Tag-3A	None	–[a]	Vector control	From Dr. H-C Chen[c]
ADD1	Wild type ADD1	2214	Overexpression	From Dr. H-C Chen[c]
HA6L	None	–[a]	Vector control	From Dr. M-D Lai[d]
CCND1	Wild type CCND1	888	Overexpression	From Dr. M-D Lai[d]
pcDNA3.1 V5-His	None	–[a]	Vector control	From Dr. P-C Yang[e]
p53	Wild type p53	1182	Overexpression	From Dr. P-C Yang[e]
pGL3-vector	None	–[a]	Vector control	Promega
pGL3-*ADD1*	*CCND1* promoter	1146	Promoter activity assay	Homemade
pGL3-*ADD1*-AP1-1-mut	*CCND1* promoter with first AP-1 mutation	1146	Promoter activity assay	Homemade

pGL3-*ADD1*-AP1-2-mut	*CCND1* promoter with second AP-1 mutation	1146	Promoter activity assay	Homemade
pGL3-*ADD1*-AP1-D-mut	*CCND1* promoter with third and fourth AP-1 mutation	1146	Promoter activity assay	Homemade
pGL4-vector	None	–[a]	Vector control	Promega
pGL4-*CCND1*	*CCND1* promoter	1190	Promoter activity assay	Homemade
pGL4-*CCND1*-AP1-1-mut	*CCND1* promoter with proximal AP-1 mutation	1190	Promoter activity assay	Homemade
pGL4-*CCND1*-AP1-2-mut	*CCND1* promoter with distal AP-1 mutation	1190	Promoter activity assay	Homemade
pGL4-*CCND1*-AP1-1/2-mut	*CCND1* promoter with both AP-1 mutation	1190	Promoter activity assay	Homemade
pGL3-*p53*	*p53* promoter	1121	Promoter activity assay	From Dr. G-T Sheu[f]
pGL3-*p53*-AP1-mut	*p53* promoter with AP-1 mutation	1121	Promoter activity assay	Homemade

[a] –, Molecular weight is not applicable.

[b] Plasmid was kindly provided by Dr. Ben-Kuen Chen from Institute of Bioinformatics and Biosignal Transduction, College of Bioscience and Biotechnology, National Cheng Kung University, Tainan, Taiwan.

[c] Plasmid was kindly provided by Dr. Hong-Chen Chen from Department of Life Sciences, National Chung Hsing University, Taichung, Taiwan.

[d] Plasmid was kindly provided by Dr. Ming-Derg Lai from Department of Biochemistry and Molecular Biology, National Cheng Kung University, Tainan, Taiwan.

[e] Plasmid was kindly provided by Dr. Pan-Chyr Yang from National Taiwan University Hospital and College of Medicine, Taipei, Taiwan.

[f] Plasmid was kindly provided by Dr. Gwo-Tarng Sheu from Institute of Medical and Molecular Toxicology, Chung Shan Medical University, Taichung, Taiwan.