

Supplemental Data

Supplementary Figure Legends

Supplementary Fig. 1. (related to Fig. 1). Relative *IL17RA* (205707_at), *IL17RB* (219255_x_at) and *IL17RC* (221926_s_at and 64440_at) mRNA levels in patients with lung squamous cell carcinoma in the GSE3268 datasets.

The significance is determined by Student *t* test. *, $P < 0.05$.

Supplementary Fig. 2. (related to Fig. 3). IL-17RB expression levels affect cell invasion/migration but not cell proliferation. (A) Representative images of migration/invasion in CL1-5 (*Top*) and A549 (*bottom*) cells infected with shLuc or IL-17RB shRNAs. (B) Representative images of migration/invasion in H441 (*Top*) and CL1-0 (*bottom*) cells infected with vector controls or IL-17RB. (C) *Left*, cell proliferation in CL1-5 and A549 cells infected with shLuc or IL-17RB shRNAs. *Right*, cell proliferation in H441 and CL1-0 cells infected with vector controls or IL-17RB.

Supplementary Fig.3 (related to Fig. 6). *IL-17B* mRNA expression in CL1-0/IL17RB cells after treatment with the MEK inhibitor PD98059 (25 μ M).

The significance is determined by one way ANOVA followed by Tukey's *post hoc* test. **, $P < 0.01$.

Supplementary Table 1. The expression levels of IL-17RB in normal tissues and paired NSCLC tumor samples

No.	Histology	IL-17RB#	
		normal tissue	tumor tissue
1	Adc	65	80
2	Adc	20	10
3	Adc	30	10
4	Adc	0	40
5	Adc	25	40
6	Undefined NSCLC	0	10
7	SCC	55	80
8	Adc	20	20
9	Adc	0	10
10	Adc	30	40
11	Adc	30	40
12	Adc	60	80
13	Adc	70	40
14	Adc	50	50
15	SCC	50	20
16	Adc	60	40
17	SCC	70	80
18	SCC	10	50
19	Adc	20	80
20	SCC	10	80
21	SCC	10	80
22	SCC	10	70
23	Adc	0	0
24	SCC	20	20
25	Adc	20	30
26	Adc	20	50
27	Adc	40	10
28	Adc	40	5
29	Adc	20	50
30	Adc	10	30
31	Adc	20	80

32	Adc	30	30
33	Adc	0	0
34	Undefined NSCLC	30	10
35	Adc	20	10
36	Adc	0	60
37	SCC	40	10
38	Adc	30	40
39	Adc	50	40
40	Adc	30	40

Abbreviations:

Adc: adenocarcinoma ; SCC: squamous cell carcinoma ; NSCLC : non-small cell lung cancers

#: According to the percentage of positively stained cells.

Supplementary Table 2. Association between IL-17RB expression and histologic types in NSCLC.

Histology	Patient No.	IL-17RB			<i>P</i> -vaule*
		T>N	N>T	Other	
	40				
Adenocarcinoma	29	16	8	5	0.890
Squamous cell carcinoma	9	6	2	1	
Undefined NSCLC	2	1	1	0	

Abbreviations:

T: tumor; N: pulmonary alveolar tissue

**P* value <0.05 was considered statistically significant (chi-square test for categorical variables).

Supplementary Table 3. Univariate and multivariable analysis of disease-free survival in lung cancer

Variables	Item	Univariate			Multivariable*		
		HR	95% CI	<i>p</i> value	HR	95% CI	<i>p</i> value
Age (y)	>70	0.82	(0.50, 1.34)	0.422	-	-	-
	≤70	1.00			-		
Sex	Male	0.82	(0.52, 1.31)	0.407	-	-	-
	Female	1.00			-		
Grade	III	2.52	(1.00, 6.36)	0.050	1.76	(0.59, 5.25)	0.310
	II	1.78	(0.88, 6.36)	0.107	-	-	-
	I	1.00			1.00		
T status	T4/T3	0.92	(0.51, 1.64)	0.769	-	-	-
	T2/T1	1.00			-		
N status	Positive	4.09	(2.50, 6.70)	<0.001	2.89	(1.67, 4.99)	<0.001
	Negative	1.00			1.00		
M status	Positive	2.60	(1.53, 4.43)	<0.001	1.53	(0.80, 2.94)	0.203
	Negative	1.00			1.00		
Performance	1	1.90	(1.21, 3.01)	0.006	1.11	(0.63, 1.97)	0.713
	0	1.00			1.00		
Smoking status	Current	1.00	(0.58, 1.72)	0.997	-	-	-
	Former	1.00	(0.56, 1.78)	0.997	-		
	Never	1.00					
IL-17RB	High	3.60	(2.21, 5.87)	<0.001	2.51	(1.49, 4.23)	0.001
	Low	1.00			1.00		

*Variables with $p < 0.1$ were included in multivariable analysis.

HR = hazard ratio; CI = confidence interval; - = not applicable.

Supplementary Table 4. Univariate and multivariable analysis of overall survival in lung cancer

Variables	Item	Univariate			Multivariable*		
		HR	95% CI	p value	HR	95% CI	p value
Age (y)	>70	0.74	(0.37, 1.49)	0.402	-	-	-
	≤70	1.00			-		
Sex	Male	1.08	(0.56, 2.10)	0.817	-	-	-
	Female	1.00			-		
Grade	III	6.33	(1.68, 23.89)	0.006	1.73	(0.36, 8.44)	0.496
	II	2.68	(0.81, 8.79)	0.105	-	-	-
	I	1.00			1.00		
T status	T4/T3	1.45	(0.71, 2.98)	0.309	-	-	-
	T2/T1	1.00			-		
N status	Positive	4.10	(2.05, 8.17)	<0.001	2.21	(0.96, 5.09)	0.062
	Negative	1.00			1.00		
M status	Positive	3.95	(2.03, 7.70)	<0.001	2.56	(1.00, 6.58)	0.051
	Negative	1.00			1.00		
Performance	1	3.33	(1.85, 5.99)	<0.001	2.18	(0.95, 4.99)	0.065
	0	1.00			1.00		
Smoking status	Current	2.05	(1.04, 4.03)	0.038	1.30	(0.52, 3.24)	0.574
	Former	1.60	(0.75, 3.41)	0.222	-	-	-
	Never	1.00			1.00		
IL-17RB	High	5.09	(2.31, 11.18)	<0.001	2.76	(1.19, 6.42)	0.019
	Low	1.00			1.00		

*Variables with $p < 0.1$ were included in multivariable analysis.

HR = hazard ratio; CI = confidence interval; - = not applicable.

Supplementary Table 5. Correlation between IL-17RB levels and Snail levels in lung cancer

Snail ^a	IL-17RB ^a		total(%)
	Low (%)	High (%)	
Low	38 (75)	13 (25)	51 (100)
High	14 (50)	14 (50)	28 (100)

a: Detection of IL-17RB and Snail expression by immunohistochemistry.

Supplementary Table 6. Correlation between IL-17RB levels and Twist levels in lung cancer

Twist ^a	IL-17RB ^a		total(%)
	Low (%)	High (%)	
Low	49 (71)	20 (29)	69 (100)
High	19 (48)	21 (52)	40 (100)

a: Detection of IL-17RB and Twist expression by immunohistochemistry.

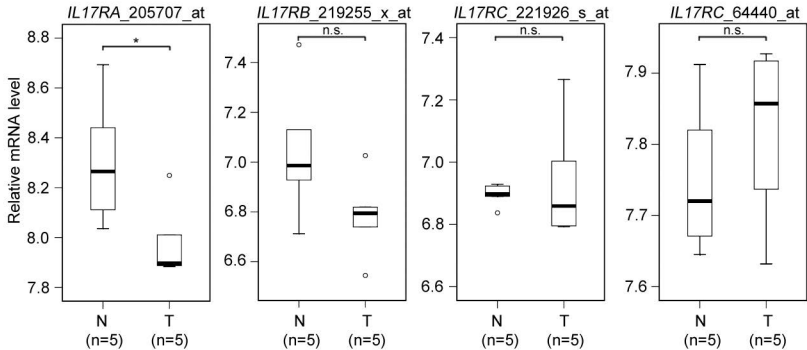
Supplementary Table 7. Antibodies for different assays

Protein	Antibody, catalog number	Application	Dilution
IL-17RB	kindly provided by Dr. W-H Lee Labatory, A68	IHC	1:200
IL-17RB	GeneTex, GTX127368	Western blot	1:2000
β -actin	GeneTex, GTX629630	Western blot	1:5000
CK18	Zytdmed Systems,#503-18330	IHC	1:200
pERK1/2	GeneTex,GTX61126	Western blot	1:500
ERK1/2	GeneTex,GTX82556	Western blot	1:1000
pGSK3 β (Ser9)	GeneTex, GTX50090	Western blot	1:1000
GSK3 β	GeneTex, GTX111230	Western blot	1:1000
β -catenin	Abcam, ab16051	Western blot	1:1000
pAMPK	GeneTex, GTX52341	Western blot	1:1000
pChk2	Cell Signal,#2197	Western blot	1:1000
Snail	GeneTex, GTX82509	Western blot	1:1000
Snail	GeneTex, GTX125918	IHC	1:25
Twist	GeneTex, GTX127310	Western blot, IHC*	1:1000,1:40*
IL-17B	R&D,MAB1248	Western blot, transwell assay#	1 μ g/mL, 4 μ g/mL#
normal mouse IgG	Santa Cruz,sc-2025	transwell assay#	4 μ g/mL#

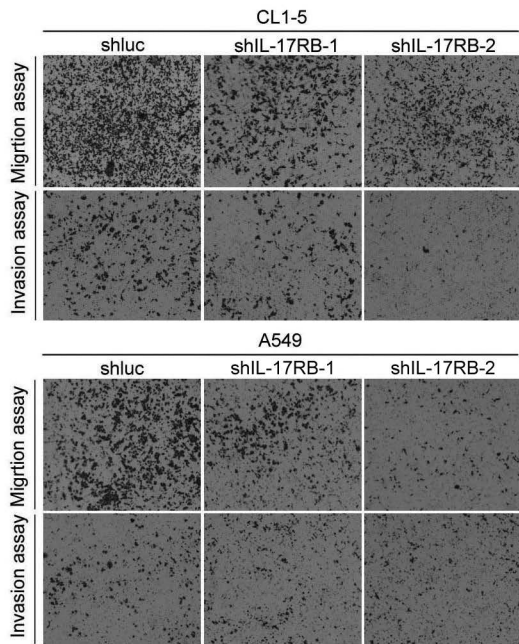
Abbreviations:

IHC: immunohistochemistry

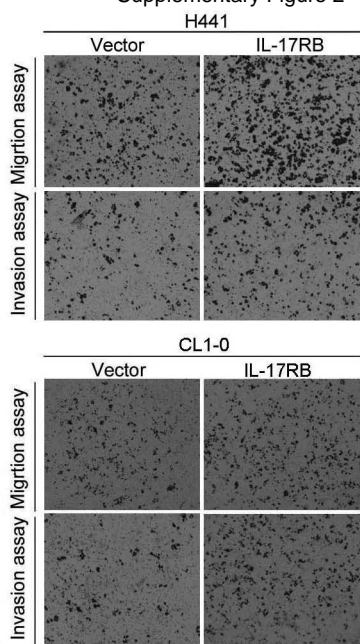
Supplementary Figure 1



A



B



C

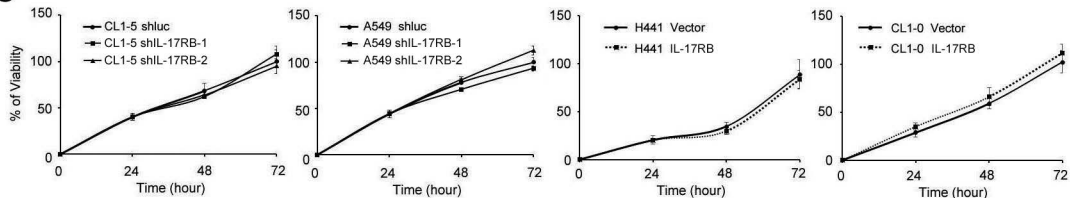


Figure S3

CL1-0

