

Table SI. Primer sequences.

Target	Forward primer (5' to 3')	Reverse primer (5' to 3')
E-cadherin	GGTCTGTCATGGAAGGTGCT	GATGGCGGCATTGTAGGT
Vimentin	AGTCCACTGAGTACCGGAGAC	CATTTACGCATCTGGCGTTC
TWIST1	GGCATCACTATGGACTTTCTCTATT	GGCCAGTTTGATCCCAGTATT
Zinc finger E-box-binding homeobox1	CGAAACGCGAGGTTTGTA	CTAGACAGGAAATCCCACACAA
SNAI1	AGGATCTCCAGGCTCGAAAG	TCGGATGTGCATCTTGAGG
SNAI2	CCATGCCTGTCATACCACAA	ACAGTGATGGGGCTGTATGC
GAPDH	ACTTCAACAGCGACACCC	TACCAGGAAATGAGCTTGAC
SNAI, Snail homolog.		

Table SII. Pearson's correlation coefficient between *GRHL2* and epithelial-to-mesenchymal transition-related genes^a.

A, Adenocarcinoma (tumor)									
Gene	<i>GRHL2</i>	<i>E-cadherin</i>	<i>Vimentin</i>	<i>ZEB1</i>	<i>ZEB2</i>	<i>TWIST1</i>	<i>TWIST2</i>	<i>SNAI1</i>	<i>SNAI2</i>
<i>GRHL2</i>	1.00	0.48	-0.41	-0.39	-0.31	-0.23	-0.32	-0.22	-0.25
	NA	0.00	0.00	0.00	6.20x10 ⁻¹³	1.90x10 ⁻⁷	2.20x10 ⁻¹³	2.60x10 ⁻⁷	1.40x10 ⁻⁸
<i>E-cadherin</i>	0.48	1.00	-0.07	-0.09	-0.06	-0.16	-0.22	-0.19	-0.22
	0.00	NA	0.09	0.04	0.19	0.00	3.40x10 ⁻⁷	9.50x10 ⁻⁶	7.10x10 ⁻⁷
<i>Vimentin</i>	-0.41	-0.07	1.00	0.59	0.62	0.23	0.32	0.15	0.38
	0.00	0.09	NA	0.00	0.00	7.60x10 ⁻⁸	1.50x10 ⁻¹³	0.00	0.00
<i>ZEB1</i>	-0.39	-0.09	0.59	1.00	0.73	0.20	0.32	0.14	0.50
	0.00	0.04	0.00	NA	0.00	6.50x10 ⁻⁶	9.00x10 ⁻¹⁴	0.00	0.00
<i>ZEB2</i>	-0.31	-0.06	0.62	0.73	1.00	0.08	0.28	0.16	0.39
	6.20x10 ⁻¹³	0.19	0.00	0.00	NA	0.06	4.70x10 ⁻¹¹	0.00	0.00
<i>TWIST1</i>	-0.23	-0.16	0.23	0.20	0.08	1.00	0.35	0.49	0.60
	1.90x10 ⁻⁷	0.00	7.60x10 ⁻⁸	6.50x10 ⁻⁶	0.06	NA	4.40x10 ⁻¹⁶	0.00	0.00
<i>TWIST2</i>	-0.32	-0.22	0.32	0.32	0.28	0.35	1.00	0.32	0.47
	2.20x10 ⁻¹³	3.40x10 ⁻⁷	1.50x10 ⁻¹³	9.00x10 ⁻¹⁴	4.70x10 ⁻¹¹	4.40x10 ⁻¹⁶	NA	6.90x10 ⁻¹⁴	0.00
<i>SNAI1</i>	-0.22	-0.19	0.15	0.14	0.16	0.49	0.32	1.00	0.40
	2.60x10 ⁻⁷	9.50x10 ⁻⁶	0.00	0.00	0.00	0.00	6.90x10 ⁻¹⁴	NA	0.00
<i>SNAI2</i>	-0.25	-0.22	0.38	0.50	0.39	0.60	0.47	0.40	1.00
	1.40x10 ⁻⁸	7.10x10 ⁻⁷	0.00	0.00	0.00	0.00	0.00	0.00	NA
B, Adenocarcinoma (normal)									
Gene	<i>GRHL2</i>	<i>E-cadherin</i>	<i>Vimentin</i>	<i>ZEB1</i>	<i>ZEB2</i>	<i>TWIST1</i>	<i>TWIST2</i>	<i>SNAI1</i>	<i>SNAI2</i>

<i>GRHL2</i>	1.00	0.70	-0.21	-0.05	-0.09	-0.19	-0.35	-0.22	-0.34
	NA	7.50x10 ⁻¹⁰	0.11	0.69	0.50	0.16	0.01	0.10	0.01
<i>E-cadherin</i>	0.70	1.00	-0.08	-0.11	-0.24	0.02	-0.25	-0.16	-0.22
	7.50x10 ⁻¹⁰	NA	0.53	0.41	0.07	0.89	0.06	0.24	0.09
<i>Vimentin</i>	-0.21	-0.08	1.00	-0.11	0.36	0.13	0.00	0.01	0.15
	0.11	0.53	NA	0.39	0.01	0.35	1.00	0.94	0.25
<i>ZEB1</i>	-0.05	-0.11	-0.11	1.00	0.52	-0.08	-0.18	0.33	0.32
	0.69	0.41	0.39	NA	3.00x10 ⁻⁵	0.53	0.18	0.01	0.01
<i>ZEB2</i>	-0.09	-0.24	0.36	0.52	1.00	0.08	-0.16	0.23	0.19
	0.50	0.07	0.01	3.00x10 ⁻⁵	NA	0.52	0.22	0.08	0.14
<i>TWIST1</i>	-0.19	0.02	0.13	-0.08	0.08	1.00	0.38	0.09	0.27
	0.16	0.89	0.35	0.53	0.52	NA	0.00	0.50	0.04
<i>TWIST2</i>	-0.35	-0.25	0.00	-0.18	-0.16	0.38	1.00	0.13	0.36
	0.01	0.06	1.00	0.18	0.22	0.00	NA	0.33	0.01
<i>SNAI1</i>	-0.22	-0.16	0.01	0.33	0.23	0.09	0.13	1.00	0.21
	0.10	0.24	0.94	0.01	0.079	0.50	0.33	NA	0.11
<i>SNAI2</i>	-0.34	-0.22	0.15	0.32	0.19	0.27	0.36	0.21	1.00
	0.01	0.09	0.25	0.01	0.14	0.04	0.01	0.11	NA

C, Squamous cell carcinoma (tumor)

Gene	<i>GRHL2</i>	<i>E-cadherin</i>	<i>Vimentin</i>	<i>ZEB1</i>	<i>ZEB2</i>	<i>TWIST1</i>	<i>TWIST2</i>	<i>SNAI1</i>	<i>SNAI2</i>
<i>GRHL2</i>	1.00	0.32	-0.41	-0.32	-0.35	-0.15	-0.30	-0.42	0.22
	NA	2.40x10 ⁻¹³	0.00	5.10x10 ⁻¹³	4.40x10 ⁻¹⁶	0.00	3.40x10 ⁻¹²	0.00	4.30x10 ⁻⁷
<i>E-cadherin</i>	0.32	1.00	-0.18	-0.10	-0.15	-0.15	-0.23	-0.24	-0.02
	2.40x10 ⁻¹³	NA	4.00x10 ⁻⁵	0.02	0.00	0.00	2.70x10 ⁻⁷	7.40x10 ⁻⁸	0.71

<i>Vimentin</i>	-0.41	-0.18	1.00	0.60	0.79	0.31	0.26	0.49	-0.06
	0.00	4.00x10 ⁻⁵	NA	0.00	0.00	2.00x10 ⁻¹²	2.40x10 ⁻⁹	0.00	0.17
<i>ZEB1</i>	-0.32	-0.1	0.60	1.00	0.72	0.22	0.26	0.31	0.14
	5.10x10 ⁻¹³	0.02	0.00	NA	0.00	1.00x10 ⁻⁶	2.50x10 ⁻⁹	2.90x10 ⁻¹²	0.00
<i>ZEB2</i>	-0.35	-0.15	0.79	0.72	1.00	0.16	0.18	0.48	-0.02
	4.40x10 ⁻¹⁶	0.00	0.00	0.00	NA	0.00	6.50x10 ⁻⁵	0.00	0.59
<i>TWIST1</i>	-0.15	-0.15	0.31	0.22	0.16	1.00	0.47	0.23	0.36
	0.00	0.00	2.00x10 ⁻¹²	1.00x10 ⁻⁶	0.00	NA	0.00	1.90x10 ⁻⁷	0.00
<i>TWIST2</i>	-0.30	-0.23	0.26	0.26	0.18	0.47	1.00	0.32	0.24
	3.40x10 ⁻¹²	2.70x10 ⁻⁷	2.40x10 ⁻⁹	2.50x10 ⁻⁹	6.50x10 ⁻⁵	0.00	NA	4.70x10 ⁻¹³	3.70x10 ⁻⁸
<i>SNAI1</i>	-0.42	-0.24	0.49	0.31	0.48	0.23	0.32	1.00	-0.19
	0.00	7.40x10 ⁻⁸	0.00	2.90x10 ⁻¹²	0.00	1.90x10 ⁻⁷	4.70x10 ⁻¹³	NA	2.30x10 ⁻⁵
<i>SNAI2</i>	0.22	-0.02	-0.06	0.14	-0.02	0.36	0.24	-0.19	1.00
	4.30x10 ⁻⁷	0.71	0.17	0.00	0.59	0.00	3.70x10 ⁻⁸	2.30x10 ⁻⁵	NA

D, Squamous cell carcinoma (normal)

Gene	<i>GRHL2</i>	<i>E-cadherin</i>	<i>Vimentin</i>	<i>ZEB1</i>	<i>ZEB2</i>	<i>TWIST1</i>	<i>TWIST2</i>	<i>SNAI1</i>	<i>SNAI2</i>
<i>GRHL2</i>	1.00	0.44	-0.14	-0.14	-0.09	-0.33	-0.11	-0.31	-0.42
	NA	0.00	0.34	0.34	0.52	0.02	0.45	0.03	0.00
<i>E-cadherin</i>	0.44	1.00	-0.07	-0.39	-0.43	-0.57	0.08	-0.14	-0.31
	0.00	NA	0.65	0.00	0.00	1.00x10 ⁻⁵	0.59	0.33	0.03
<i>Vimentin</i>	-0.14	-0.07	1.00	0.32	0.46	0.32	-0.24	-0.05	0.35
	0.34	0.65	NA	0.02	0.00	0.02	0.09	0.72	0.01
<i>ZEB1</i>	-0.14	-0.39	0.32	1.00	0.71	0.12	-0.38	0.10	0.21
	0.34	0.00	0.02	NA	5.30x10 ⁻⁹	0.41	0.01	0.47	0.14

<i>ZEB2</i>	-0.09	-0.43	0.46	0.71	1.00	0.39	-0.24	0.10	0.44
	0.52	0.00	0.00	5.30×10^{-9}	NA	0.00	0.09	0.49	0.00
<i>TWIST1</i>	-0.33	-0.57	0.32	0.12	0.39	1.00	0.17	0.30	0.60
	0.02	1.00×10^{-5}	0.02	0.41	0.00	NA	0.24	0.03	3.80×10^{-6}
<i>TWIST2</i>	-0.11	0.08	-0.24	-0.38	-0.24	0.17	1.00	0.28	-0.02
	0.45	0.59	0.09	0.01	0.09	0.24	NA	0.05	0.87
<i>SNAI1</i>	-0.31	-0.14	-0.05	0.10	0.10	0.30	0.28	1.00	0.33
	0.03	0.33	0.72	0.47	0.49	0.03	0.05	NA	0.02
<i>SNAI2</i>	-0.42	-0.31	0.35	0.21	0.44	0.60	-0.02	0.33	1.00
	0.00	0.03	0.01	0.14	0.00	3.80×10^{-6}	0.87	0.02	NA

^aUpper row, correlation coefficient; lower row, P-value. ZEB, Zinc finger E-box-binding homeobox; n.s., not significant; SNAI, snail homolog.

Table SIII. Cell lines used for DNA copy number analysis.

A, Adenocarcinoma			
HCC2279	H3122	HCC515	HCC1195
H820	HCC1192	HCC1171	HCC1897
H969	HCC4054	HCC1210	HCC2302
H1993	A549	HCC1637	HCC4006
H2135	H1355	HCC1705	HCC4047
HCC4058	H1373	HCC1974	HCC4225
H1573	H1395	HCC2935	TC255C2
H1581	H1435	HCC4011	H1498
H2347	H1437	HCC4019	
HCC122	H1651	HCC4087	
HCC149	H1693	HCC4150	
HCC4059	H1734	Calu-3	
H358	H1838	H1915	
H441	H2023	H2286	
H1404	H2087	H2342	
H1869	H2170	H2887	
H2073	H2250	H3255	
H2228	H2258	HCC78	
H2444	H2291	HCC366	
H2882	HCC446	HCC827	
B, Squamous cell carcinoma			
HCC3350	HCC2344	H2122	HCC1820
HCC1313	HCC3173	HCC95	HCC1944
HCC1908	CAL-12T	HCC1719	HCC2814
HCC2352	H596	HCC3498	HCC3444
HCC1588	H2085	H292	TC319C
C, Non-small cell lung cancer-not otherwise specified			
HOP-92	H1568	A427	HCC4017
H1563	H1623	Calu-1	LOU-NH91
H2126	H1648	DFCI024	H23
HCC3195	H1650	H460	

SK-LU-1	H1819	H522
EBC-1	H1703	H661
EKVX	H1781	H838
H125	H1975	H920
H650	H2030	H1666
H1299	H2172	H1793
H1792	HCC193	H2086
H1944	HCC1359	H2110
HOP-62	HCC1501	H2405
PC-9	HCC2450	HCC15
Calu-6	HCC3051	HCC364
DFCI032	HCC4021	HCC461
H157	HCC4032	HCC1438
H322	HCC4190	HCC2108
H324	HCC4256	HCC2270
H647	TC464C	HCC2885
