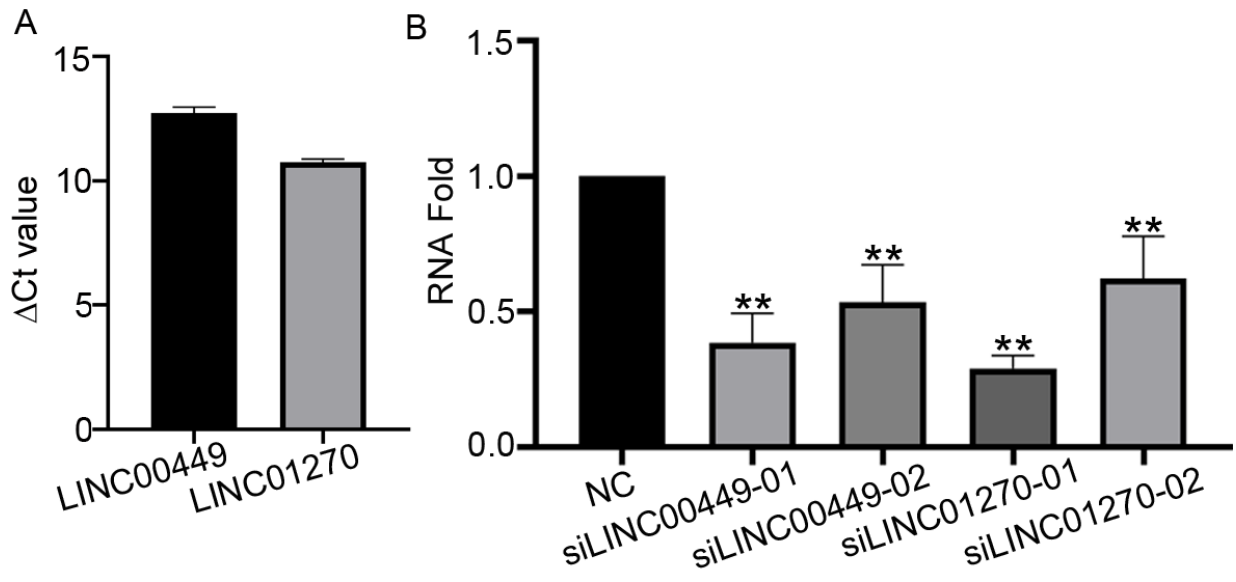


Figure S1. Validation of knockdown efficiency. A) The expression levels of LINC00449 and LINC01270 in MDA-MB-231 cells were measured by standard qRT-PCR and shown as the mean Ct values from two independent experiments. GAPDH was used for reference. B) MDA-MB-231, transfected with the indicated siRNAs, were harvested after 48 hours for qPCR analysis to assess knockdown efficiency. The fold change of each lincRNA was compared with negative control (NC) siRNA transfected group. Data were expressed as mean \pm SD. P-values were determined by one-way ANOVA followed by Dunnett's multiple comparisons test: ** P-value < 0.01.



Supplementary Table 1. Primer sequences.

Gene Name	Sequence (5'-3')
LINC00449	F: GCATTCTTGCATTGGGCAGT R: TGAGCTCTCAGGTATGCTCG
LINC01270	F: AGCACCAGTTAGCCCAGATG R: CACATTCCTGCGCTTTCGTG
GAPDH	F: TCCTGTTGACAGTCAGCCGCA R: ACCAGGCGCCAATACGACCA

Supplementary Table 2. siRNA target sequences.

Name	Sense sequence (5'-3')	Antisense sequence (5'-3')	Assay IDs
LINC00449-01	GGAAA AUGGGAGUAGGAUATT	UAUCCUACUCCCAUUUCCTT	n486205
LINC00449-02	GCAUCUUCACGGACAAUUUTT	AAAUUGUCCGUGAAGAUGCCT	n503412
LINC01270-01	GAGCUGAGCUUAAGAGUUATT	UAACUCUUAAGCUCAGCUCCC	n503493
LINC01270-02	CCACGAUCCCGACUUGUAUTT	AUACAAGUCGGGAUCGUGGTG	n503492

Supplementary Table 3. 25 lincRNAs significantly associated with overall survival in both SBCSS and SCCS.

ENSEMBL ID	Gene Symbol	SBCSS		SCCS		Meta-Analysis	
		HR	P Value	HR	P Value	Q Stat	P Value
ENSG00000175773	ZBTB44-DT	1.94 (1.3 - 3)	0.003	2.18 (1.1 - 4.4)	0.028	0.786	<0.001
ENSG00000180712	LINC02363	1.42 (1 - 2)	0.050	2.77 (1.1 - 7.1)	0.034	0.193	0.010
ENSG00000203441	LINC00449	1.55 (1.2 - 2.1)	0.004	2.65 (1.3 - 5.4)	0.008	0.181	<0.001
ENSG00000203999	LINC01270	1.55 (1 - 2.4)	0.041	2.41 (1.2 - 5)	0.017	0.305	0.003
ENSG00000225511	LINC00475	1.32 (1 - 1.7)	0.038	2.32 (1.1 - 5)	0.031	0.175	0.008
ENSG00000227082	LINC02798	1.64 (1.1 - 2.4)	0.009	4.23 (1.1 - 16)	0.034	0.181	0.002
ENSG00000227544		1.53 (1.1 - 2.1)	0.010	2.57 (1 - 6.6)	0.050	0.306	0.002
ENSG00000227588	CNTN4-AS2	1.20 (1 - 1.4)	0.037	1.45 (1 - 2)	0.027	0.325	0.004
ENSG00000228308	LINC01209	1.68 (1.3 - 2.2)	<0.001	2.01 (1.1 - 3.5)	0.015	0.572	<0.001
ENSG00000228889	UBAC2-AS1	1.44 (1.1 - 1.9)	0.015	2.19 (1.2 - 4.1)	0.013	0.232	0.001
ENSG00000230523	LINC01756	1.47 (1 - 2.1)	0.039	2.32 (1.1 - 4.7)	0.020	0.259	0.004
ENSG00000231595		1.55 (1.1 - 2.2)	0.018	3.09 (1.3 - 7.4)	0.012	0.155	0.002
ENSG00000232458	LINC01450	1.42 (1.1 - 1.9)	0.017	1.96 (1.1 - 3.4)	0.016	0.302	0.001
ENSG00000236423	LINC01134	1.54 (1.1 - 2.1)	0.004	2.03 (1 - 4.1)	0.047	0.475	0.001
ENSG00000244733		1.44 (1 - 2)	0.030	2.69 (1.1 - 6.6)	0.029	0.194	0.005
ENSG00000250899		1.29 (1 - 1.6)	0.028	1.93 (1.1 - 3.5)	0.033	0.224	0.005
ENSG00000258561		1.68 (1.1 - 2.5)	0.014	2.08 (1.1 - 3.8)	0.016	0.568	0.001
ENSG00000261334		1.51 (1.1 - 2.2)	0.025	3.52 (1.1 - 11)	0.030	0.163	0.005
ENSG00000266278	LINC01910	1.48 (1 - 2.1)	0.031	2.36 (1 - 5.3)	0.038	0.303	0.005
ENSG00000266821		1.57 (1.2 - 2.1)	0.004	5.21 (1.2 - 22)	0.025	0.112	0.001
ENSG00000270069	MIR222HG	1.33 (1 - 1.8)	0.040	2.20 (1.3 - 3.9)	0.006	0.117	0.002
ENSG00000271417		1.79 (1.3 - 2.5)	0.000	2.70 (1.1 - 6.5)	0.028	0.389	<0.001
ENSG00000271743		1.39 (1.1 - 1.8)	0.012	2.07 (1 - 4.2)	0.043	0.299	0.002
ENSG00000273374		1.68 (1.2 - 2.4)	0.004	2.39 (1.2 - 4.6)	0.009	0.351	<0.001
ENSG00000279978		1.43 (1.1 - 1.8)	0.005	2.41 (1.1 - 5.2)	0.026	0.207	0.001

Supplementary Table 4. 61 lincRNAs had a significant association with disease-free survival ($P < 0.05$) in SBCSS and were significantly higher expressed in tumor tissues compared with adjacent normal tissues in TCGA data ($\log_2(\text{Fold Change}) > 0.5$ and $\text{FDR} < 0.05$).

ENSEMBL ID	Gene Symbol	SBCSS		Diff Exp (Tumor Vs Normal)	
		HR	P Value	$\log_2(\text{Fold-Change})$	FDR
ENSG00000145063		1.38 (1.1 - 1.7)	0.002	2.56	<0.001
ENSG00000177234	LINC01561	1.68 (1.1 - 2.5)	0.014	4.87	<0.001
ENSG00000179066		1.24 (1 - 1.5)	0.033	1.68	<0.001
ENSG00000196979	GPRACR	1.68 (1.2 - 2.5)	0.007	1.25	<0.001
ENSG00000197180		0.76 (0.59 - 0.98)	0.036	0.85	<0.001
ENSG00000198468	FLVCR1-DT	1.46 (1.1 - 2)	0.013	0.67	<0.001
ENSG00000203441	LINC00449	1.63 (1.2 - 2.2)	0.002	0.52	<0.001
ENSG00000203999	LINC01270	1.59 (1.1 - 2.4)	0.026	0.75	<0.001
ENSG00000214900	LINC01588	1.51 (1.2 - 2)	0.003	1.48	<0.001
ENSG00000226091	LINC00937	1.41 (1.1 - 1.9)	0.017	0.69	<0.001
ENSG00000226137	BAIAP2-DT	0.67 (0.5 - 0.92)	0.012	0.50	<0.001
ENSG00000227036	LINC00511	1.50 (1.2 - 1.9)	0.000	2.93	<0.001
ENSG00000227533	SLC2A1-AS1	1.43 (1.1 - 1.9)	0.008	0.54	<0.001
ENSG00000228421		0.76 (0.59 - 0.97)	0.027	0.70	<0.001
ENSG00000232679	LINC01705	1.25 (1.1 - 1.5)	0.009	5.76	<0.001
ENSG00000234571	H2BP2	1.68 (1.1 - 2.6)	0.016	0.96	<0.001
ENSG00000235142	LINC02532	1.21 (1 - 1.4)	0.041	2.16	<0.001
ENSG00000235244	DANT2	1.21 (1 - 1.4)	0.044	0.70	<0.001
ENSG00000235295	LINC01634	1.66 (1.1 - 2.4)	0.011	1.04	0.001
ENSG00000247373	TMED2-DT	1.41 (1 - 1.9)	0.028	0.67	<0.001
ENSG00000247624	CPEB2-DT	1.58 (1 - 2.5)	0.048	0.89	<0.001
ENSG00000249267	LINC00939	1.39 (1 - 1.9)	0.050	0.69	0.001
ENSG00000249859	PVT1	1.30 (1 - 1.7)	0.043	1.47	<0.001
ENSG00000251161		1.38 (1 - 1.8)	0.030	0.50	<0.001
ENSG00000251442	LINC01094	1.39 (1 - 1.9)	0.030	1.19	<0.001
ENSG00000251538	LINC02201	2.00 (1.3 - 3.1)	0.001	2.80	<0.001
ENSG00000253490	LINC02099	1.80 (1.2 - 2.6)	0.002	2.41	<0.001
ENSG00000255345		1.36 (1 - 1.8)	0.033	3.01	<0.001
ENSG00000258414		1.27 (1 - 1.6)	0.033	0.99	<0.001
ENSG00000258910	LINC01956	1.15 (1 - 1.3)	0.043	2.85	<0.001
ENSG00000259656		1.23 (1 - 1.5)	0.047	0.51	0.001
ENSG00000260710		0.84 (0.71 - 0.99)	0.034	2.37	<0.001
ENSG00000260778		0.76 (0.61 - 0.95)	0.014	0.83	<0.001

ENSG00000261526		0.71 (0.52 - 0.97)	0.030	0.53	<0.001
ENSG00000261670		1.58 (1.1 - 2.2)	0.010	1.60	<0.001
ENSG00000262188	LINC01978	1.35 (1.1 - 1.7)	0.009	2.12	<0.001
ENSG00000262877		0.82 (0.68 - 0.99)	0.037	0.55	0.001
ENSG00000263680		1.28 (1 - 1.6)	0.025	2.41	<0.001
ENSG00000263731		1.28 (1 - 1.6)	0.033	0.62	<0.001
ENSG00000267065	LINC02080	1.65 (1.2 - 2.2)	0.001	0.54	<0.001
ENSG00000268621	IGFL2-AS1	1.28 (1.1 - 1.5)	0.011	1.12	<0.001
ENSG00000269416	LINC01224	1.52 (1 - 2.2)	0.031	3.71	<0.001
ENSG00000270124		0.76 (0.65 - 0.9)	0.001	1.03	<0.001
ENSG00000270673	YTHDF3-AS1	1.28 (1.1 - 1.6)	0.013	1.07	<0.001
ENSG00000271119		0.73 (0.55 - 0.98)	0.034	0.54	<0.001
ENSG00000271420		1.23 (1 - 1.5)	0.041	0.92	<0.001
ENSG00000272079		1.25 (1 - 1.5)	0.040	1.68	<0.001
ENSG00000272455		1.32 (1.1 - 1.6)	0.017	0.96	<0.001
ENSG00000272853		0.77 (0.59 - 1)	0.049	1.03	<0.001
ENSG00000273084		0.81 (0.67 - 0.98)	0.033	0.66	<0.001
ENSG00000273449		1.28 (1 - 1.6)	0.022	0.83	<0.001
ENSG00000273576		0.83 (0.69 - 0.99)	0.036	0.92	<0.001
ENSG00000273759		0.80 (0.65 - 0.99)	0.044	0.95	<0.001
ENSG00000274367		1.37 (1.1 - 1.7)	0.004	2.20	<0.001
ENSG00000274605	PCCA-DT	0.80 (0.67 - 0.96)	0.013	0.62	<0.001
ENSG00000275236		1.39 (1.1 - 1.8)	0.018	0.88	<0.001
ENSG00000275897		1.27 (1 - 1.6)	0.021	0.72	<0.001
ENSG00000277022		1.30 (1 - 1.7)	0.036	2.21	<0.001
ENSG00000279078	SND1-IT1	1.38 (1 - 1.8)	0.035	0.82	<0.001
ENSG00000281406	BLACAT1	1.26 (1 - 1.5)	0.027	0.52	0.046
ENSG00000281706		1.31 (1 - 1.7)	0.044	0.71	<0.001