

Table S1. The antibodies used in this study are listed as follows.

Antibodies	Source	Identifier
Rabbit anti-STIM1	Cell Signaling Technology	Cat#5668
Rabbit anti-STIM1	Proteintech	Cat#11565-1-AP
Rabbit Anti-TSPAN18	Thermo Scientific	Cat#PA5-48957
Rabbit anti-Flag	Cell Signaling Technology	Cat#14793
Rabbit anti-Myc	Cell Signaling Technology	Cat#2276
Rabbit anti-His	Cell Signaling Technology	Cat#12698
Rabbit anti-HA	Cell Signaling Technology	Cat#3724
Mouse anti-E-cadherin	Cell Signaling Technology	Cat#14472
Rabbit anti-N-cadherin	Cell Signaling Technology	Cat#13116
Mouse anti-Vinculin	Abcam	Cat#ab129002
Rabbit anti-TRIM32	GeneTex	Cat#113937
Rabbit anti-MIB1	Proteintech	Cat#11893-1-AP
Mouse anti-GAPDH	Cell Signaling Technology	Cat#5174
Normal rabbit IgG	Cell Signaling Technology	Cat#2729
Anti-Rabbit IgG (H+L)	Cell Signaling Technology	Cat#14708
Anti-Mouse IgG (H+L)	Cell Signaling Technology	Cat#14709

Table S2. The primers used in real time qPCR are listed as follows.

Primer Name	Sequence 5'-3'
TSPAN18 Forward	TTCTTCACCAAGGAGCTCACC
TSPAN18 Reverse	CTCCGGCACCTCTTCACTATC
STIM1 Forward	CTTGTCCATGCAGTCCCCTAG
STIM1 Reverse	GTGGTGATGGAAGAGGAGCAA
GPADH Forward	CAAGGCTGAGAACGGGAAG
GPADH Reverse	TGAAGACGCCAGTGGACTC

Table S3. Univariate analysis of prognostic factors correlated with OS and CSS

Variables	OS				CSS			
	Cohort 1		Cohort 2		Cohort 1		Cohort 2	
	HR (95%CI)	<i>p</i> - value	HR (95%CI)	<i>p</i> - value	HR (95%CI)	<i>p</i> - value	HR (95%CI)	<i>p</i> - value
Age (y)	1.94	0.059	1.62	0.341	1.69	0.197	1.21	0.713
≥66/<66	0.98-3.88		0.63-4.14		0.76-3.76		0.43-3.41	
Gleason score	2.58	0.009	7.28	0.001	2.60	0.025	7.06	0.010
7(4+3)-10/6-7(3+4)	1.27-5.24		2.14-24.67		1.13-5.98		1.59-31.39	
Tumor stage	2.14	0.025	5.50	<0.001	2.46	0.026	6.03	0.001
T3-4/T2	1.10-4.17		2.30-13.16		1.11-5.43		2.06-17.71	
Distal metastasis	5.83	<0.001	4.43	0.003	6.17	<0.001	7.27	<0.001
Present/Absent	2.63-12.93		1.63-12.03		2.45-15.52		2.48-21.30	
TSPAN18	2.35	0.011	2.77	0.019	2.39	0.031	3.75	0.016
High/Low	1.21-4.54		1.18-6.59		1.08-5.30		1.28-11.00	

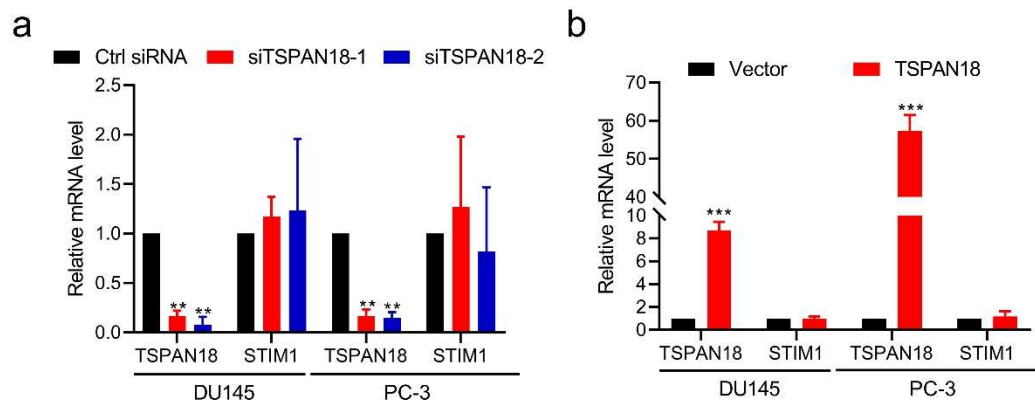
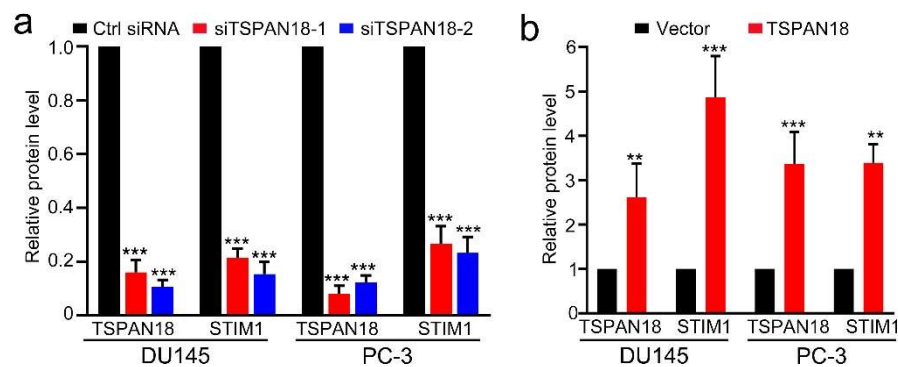
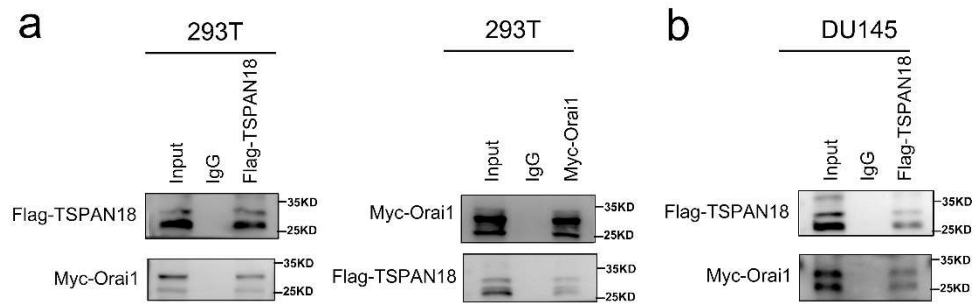
Abbreviations: OS, overall survival; CSS, cancer-specific survival; HR hazard ratio, CI confidence interval; *p*-value<0.05 marked in bold font shows statistically significant.

Table S4. Multivariate analysis of prognostic factors correlated with OS and CSS

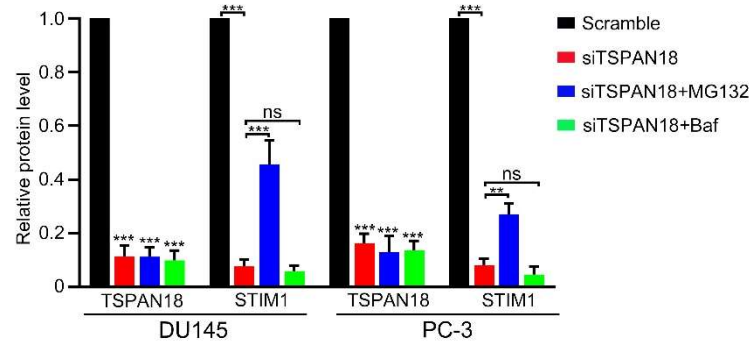
Variables	OS				CSS			
	Cohort 1		Cohort 2		Cohort 1		Cohort 2	
	HR (95%CI)	<i>p</i> - value	HR (95%CI)	<i>p</i> - value	HR (95%CI)	<i>p</i> - value	HR (95%CI)	<i>p</i> - value
Gleason score	1.66	0.192	4.76	0.015	1.56	0.333	3.88	0.088
7(4+3)-10/6-7(3+4)	0.77-3.57		1.35-16.77		0.63-3.85		0.82-18.41	
Tumor stage	1.84	0.085	4.05	0.003	1.96	0.114	3.80	0.025
T3-4/T2	0.92-3.67		1.61-10.18		0.85-4.49		1.19-12.14	
Distal metastasis	5.48	<0.001	1.24	0.699	6.28	<0.001	2.07	0.236
Present/Absent	2.41-12.43		0.42-3.67		2.40-16.40		0.62-6.86	
TSPAN18	2.27	0.025	1.98	0.130	2.43	0.044	2.43	0.120
High/Low	1.11-4.67		0.82-4.79		1.03-5.77		0.80-7.43	

Abbreviations: OS, overall survival; CSS, cancer-specific survival; HR hazard ratio, CI confidence interval; *p*-value<0.05 marked in bold font shows statistically significant.

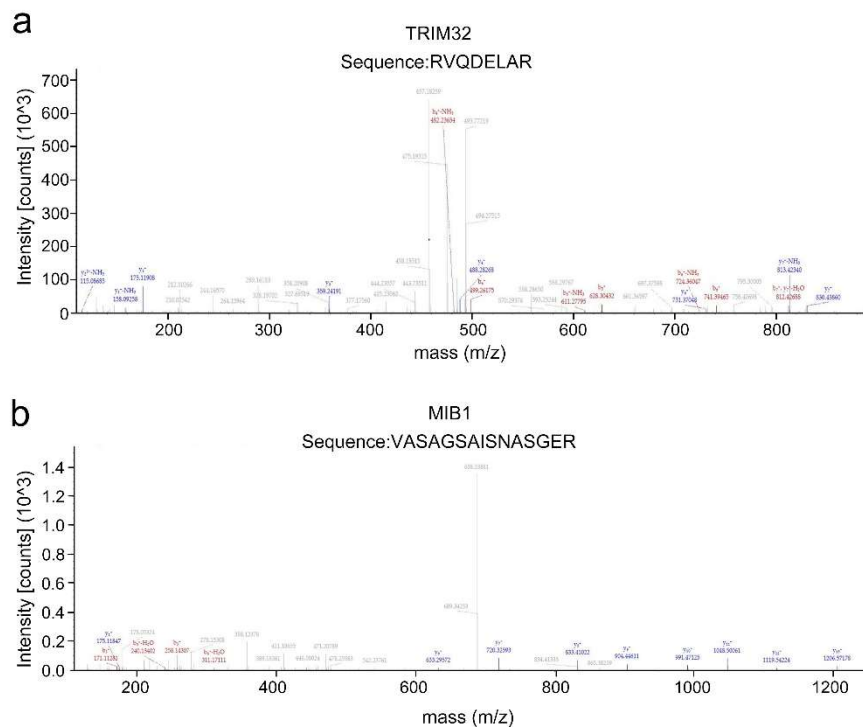
1 Figures and Legends



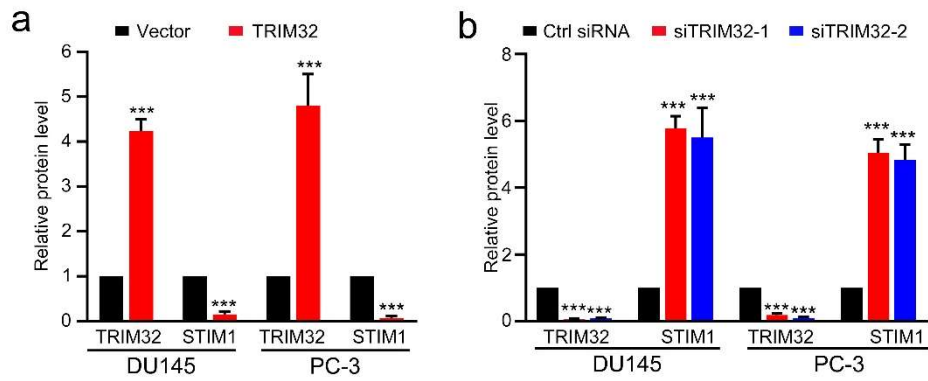
1 **Supplemental Figure 3** The qRT-PCR analyses of TSPAN18 and STIM1 mRNA level in
2 DU145 and PC-3 cells treated as indicated. The values are expressed as the mean $\pm$ s.d. of three
3 independent experiments. $**p < 0.01$, $***p < 0.001$, ANOVA with post hoc test or Student's *t*
4 test.



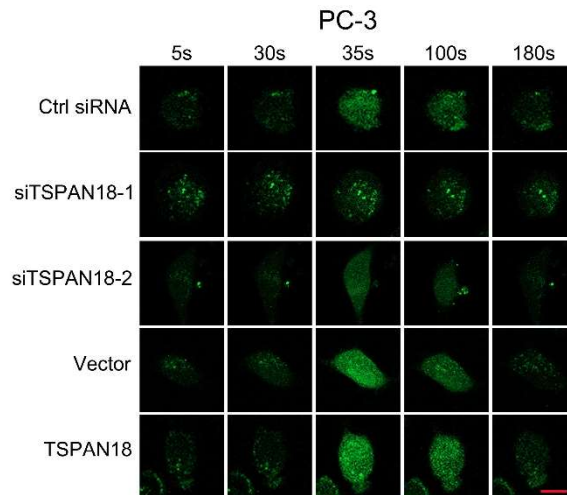
5 **Supplemental Figure 4** The Western Blot analyses of TSPAN18 and STIM1 protein level in
6 DU145 and PC-3 cells treated as indicated. The values are expressed as the mean $\pm$ s.d. of three
7 independent experiments. $**p < 0.01$, $***p < 0.001$, ANOVA with post hoc test. Baf:
8 Bafilomycin, ns: no significance.



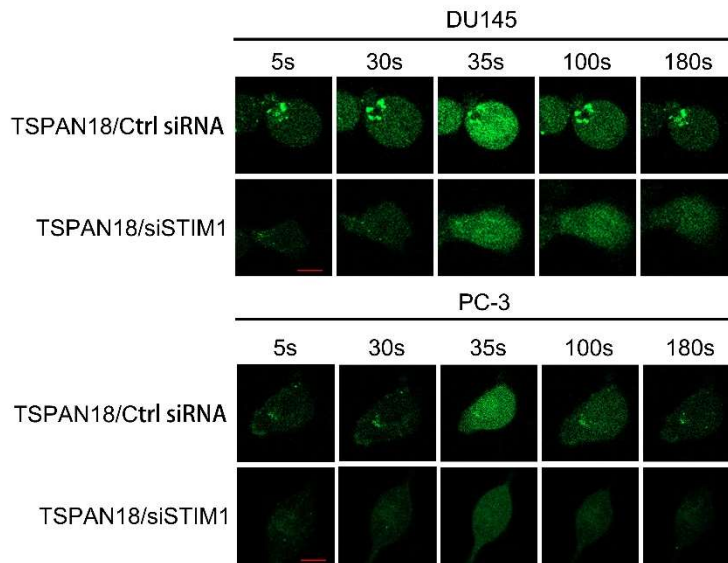
9 **Supplemental Figure 5** The representative peptide of TRIM32 (a) or MIB1 (b) from mass
10 spectrometry.



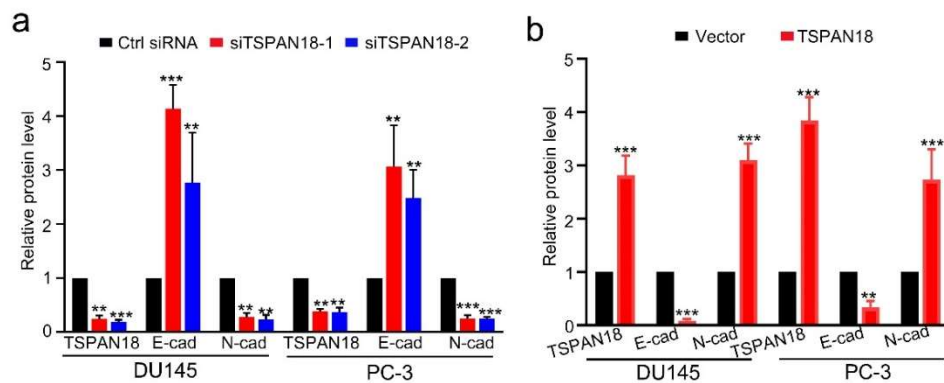
1 **Supplemental Figure 6** The Western Blot analyses of TRIM32 and STIM1 protein level in
2 DU145 and PC-3 cells treated as indicated. The values are expressed as the mean $\pm$ s.d. of three
3 independent experiments. *** $p < 0.001$, Student's t test or ANOVA with post hoc test.



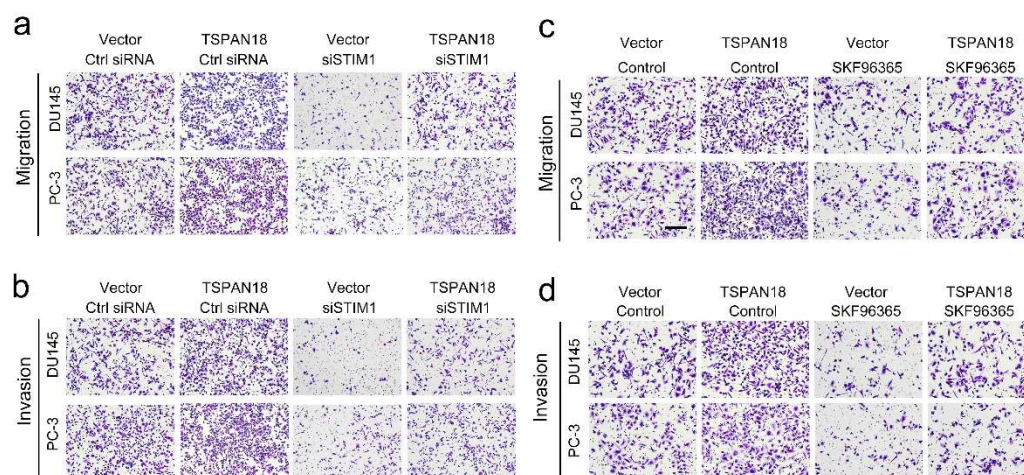
4 **Supplemental Figure 7** The representative time-lapse images of cytosolic Ca^{2+} level within
5 PC-3 cells transfected with indicated siRNAs or plasmids. Scale bars: red, 50 μm .



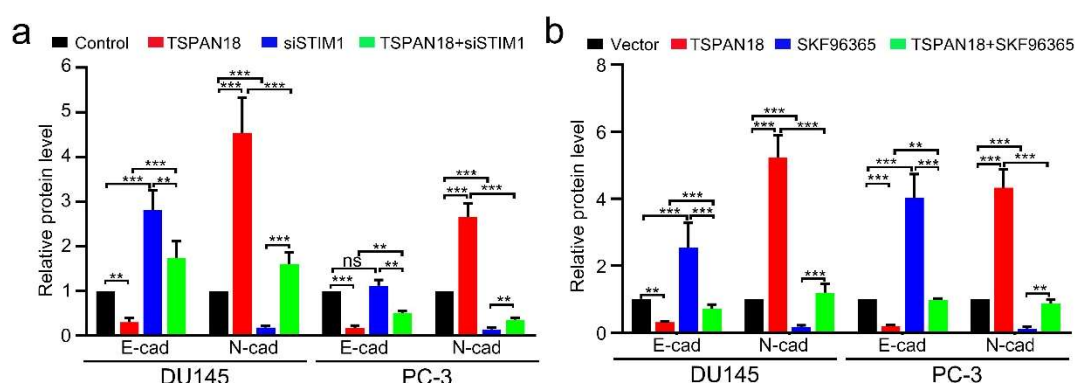
1 **Supplemental Figure 8** The representative time-lapse images of cytosolic Ca^{2+} level within
2 indicated cells. Scale bars: red, 50 μm .



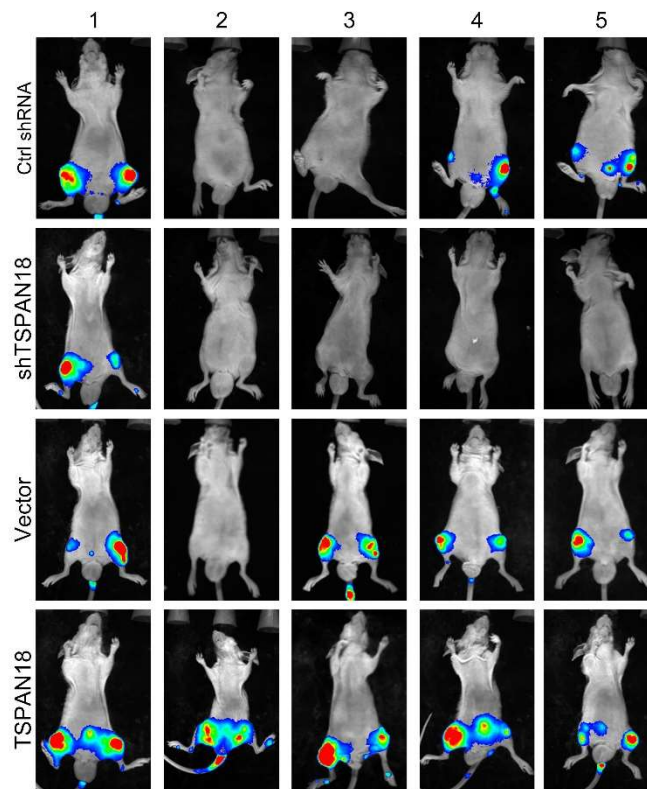
3 **Supplemental Figure 9** The Western Blot analyses of E-cadherin and N-cadherin protein level
4 in DU145 and PC-3 cells treated as indicated. The values are expressed as the mean $\pm$ s.d. of
5 three independent experiments. $**p < 0.01$, $***p < 0.001$, ANOVA with post hoc test or
6 Student's t test.



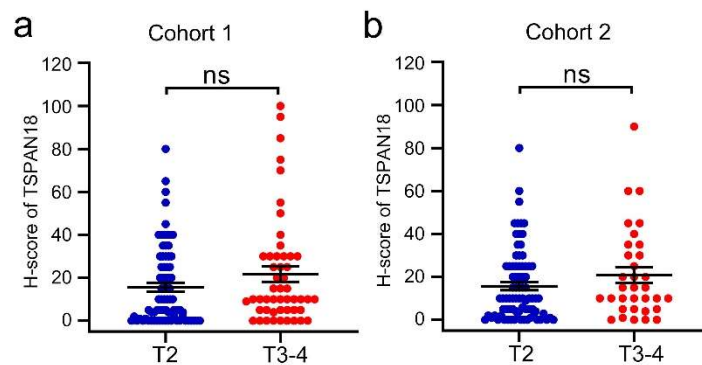
1 **Supplemental Figure 10** The representative images of migration and invasion assays using
2 TSPAN18-overexpressing or control DU145 and PC-3 cells transfected with indicated siRNAs
3 (a, b) or treated with SKF96365 or DMSO (c, d).



4 **Supplemental Figure 11** The Western Blot analyses of N-cadherin and E-cadherin protein
5 level in DU145 and PC-3 cells treated as indicated. The values are expressed as the mean $\pm$ s.d.
6 of three independent experiments. ** $p < 0.01$, *** $p < 0.001$, ANOVA with post hoc test. ns: no
7 significance.



1 **Supplemental Figure 12** The representative bioluminescence images of the mice after 6 weeks
2 of inoculations with indicated PC-3 cells.



3 **Supplemental Figure 13** The expression difference of TSPAN18 between low T stage PCa
4 tissues and high T stage PCa tissues in Cohort 1 (a) and Cohort 2 (b). ns: no significance.
5 Student's *t* test.