TERT or IgG as indicated. For the western blots, representative images of n=3 independent experiments are shown. Student's t-test was used, and * indicates $p< 0.05$ and # indicates a non-significant p-value, compared to sh/siControl.

Figure 6: TERT regulates MYC half-life and ubiquitination.

(A) and (B) Western blots showing MYC levels upon TERT or *Terc* knockdown following cycloheximide treatment (CHX) for indicated time points in P493 cells and EμMYC B cells. (C) and (D) Western blots in P493 and EmMYC B cells showing the levels of MYC, TERT and ACTIN upon TERT knockdown, with and without MG132 treatment (10 μM, 2 h). (E) Western blots showing levels of indicated proteins upon vector, TERT WT and TERT DN expression. (F) Coimmunoprecipitation between endogenous MYC and GSK3β in cells infected with shRNA against control (-) or TERT(+) and immunoblotting with indicated antobodies. (G) 293T cells were transfected with HA-MYC, His-ubiquitin along with shControl or shTERT 1. 48h post transfection cells were harvested, immunoprecipitated with Ni-NTA beads, and western blotted with HA. Right panel shows the inputs. (H) In vivo MYC ubiquitination assay in cells transfected with control (-) or TERT (+) shRNAs along with HA-Ub. Immunoprecipitation and immunoblots from lysates or immunoprecipitaed material were performed by using indicated antibodies. For the western blots, representative images of n=3 independent experiments are shown.

Figure 7: Graphical model. TERT levels, which are limiting in reconstituting telomerase activity in normal cells, are upregulated by increased MYC in cancer cells. TERT, in turn, enhances MYC stability and function, thereby regulating its own levels and telomerase activity. This function of TERT does not require Terc, and is independent of its function at telomeres. Enhanced MYC stability and function in high TERT and high MYC cells, which is a consequence of this feed forward mechanism, leads to enhanced oncogenesis due to downstream targets of MYC, which are known to regulate aspects of cell cycle, proliferation and metabolism.

Supplementary Figure 1: (A) Western blot of MYC and TERT in B-cells from EμMYC mice (n=4) compared to wildtype mice (n=4). (B) Viability of EμMYC B-cells following TERT knockdown using 2 independent shRNAs, which could be partially rescued by the overexpression of human TERT. (C)

Viability of wildtype and EμMYC B-cells following TERT knockdown. (D) TERT protein levels, as shown by Western blot (top), in primary lymphoma cells from EμMYC mice after silencing *Terc* (sh-*Terc*) (bottom). Values denote mean±s.d., n=2. (E) Teloblot showing the length of telomeres in primary lymphoma cells from EμMYC mice after silencing *Terc* (sh*Terc*) or TERT (shTERT). One way ANOVA with Tukey's Multiple Comparison Test was used for (B and C) and students t-test was used for (D) * indicates $p<0.05$ vs. shControl, ** indicates $p<0.01$ vs. shControl, ^ indicates non-significant p-value vs. shControl and ## indicates $p<0.01$ vs. shTERT-A or shTERT-B. For the western blots, representative images of n=3 independent experiments are shown.

Supplementary Figure 2: (A) Teloblot showing of telomere lengths in tumors from EμMYC;TERT+/+ and EμMYC;TERT-/- mice (n=2 for each genotype). (B) Immunofluorescence staining for TRF2 (green) and γH2AX (red) in EμMYC;TERT+/+, and EμMYC;TERT-/- B cells The cell nuclei were counterstained with DAPI (blue). We did not observe any DNA damage foci (γH2AX staining) at telomeric regions. As B cells are small and round, the staining is less distinct. Representative images are shown, and cells isolated from 2 mice of each genotype were analyzed (60x magnification).

Supplementary Figure 3: (A) ChIP-seq binding profiles at selected promoters in P493 cells (B) and EμMYC;TERT+/+ and EμMYC;TERT-/- B cells. (C, D) Validation of selected ChIP seq targets in P493 cells with additional shRNA constructs. These changes could be rescued by the overexpression of TERT WT or TERT DN. (E) Validation of selected ChIP seq targets in B cells isolated from 4-week old, pretumoral EμMYC;TERT+/+ and EμMYC;TERT-/- mice (n=3 for each genotype) using antibodies for MYC and Pol-II. The B-cells from EμMYC;TERT-/- showed lower enrichment of MYC and Pol-II at the promoters of selected MYC-regulated genes. (F) NF-Y ChIP was carried out in P493 cells infected with shControl and shTERT. Graphs show % Input for indicated target promoters. (G) Heatmap showing the validation of the expression of selected Myc-target genes in 12-week-old EμMYC;TERT+/+, EμMYC;TERT+/- and EμMYC;TERT-/- spleen B cells. (H-I) Validation of selected gene expression changes in P493 cells with indicated infections. X axis labels indicate rRNA target genes and rDNA regions respectively. (J) Validation of selected gene expression changes in EμMYC B cells. Values denote mean±s.d., n=3. One way ANOVA with Tukey's Multiple Comparison Test was used for (C, D, H, I and J) and students t-test was used for (E) and (F) * indicates $p<0.05$ vs. shControl, ** indicates $p<0.01$ vs. shControl, ^ indicates a non-significant p-value vs. shControl, # indicates $p<0.05$ vs. shTERT3 (for C, D, H, I) or shTERT-A or shTERT-B (for J), ## indicates $p<0.01$ vs. shTERT3 (for C, D, H, I) or

shTERT-A or shTERT-B (for J) and @ indicates a non-significant p-value vs. shTERT3 (for C, D, H, I) or shTERT-A or shTERT-B (for J).

Supplementary Figure 4: (A-B) Gene expression analysis in P493 cells with knockdown of TERT and *Terc* under high MYC (cells grown in no tetracycline, no estradiol) and low MYC conditions [cells grown with tetracycline (0.1 μg/ml) and β-estradiol (1 μM)]. Values denote mean±s.d., n=3. Students t-test was used and * indicates $p< 0.05$.

Supplementary Figure 5: (A) VA13 cells were transfected with the indicated expression vectors. 48 h post transfection, the samples were harvested and processed for quantitative RT-PCR. The graph shows relative TERT expression. ACTIN was used as the reference gene. (Left panel). VA13 cells were transfected with the indicated expression vectors. 48 h post transfection, the samples were harvested and processed for western blotting of MYC and ACTIN (right panel). (B) MYC was immunoprecipitated from MIHA cells and the eluates were western blotted for indicated proteins. (C) Co-Immunoprecipitation between endogenoeus MYC and TERT in the P493 cells with shControl, shTERT 2 or sh*Terc*. (D) Schematic showing the various domains of MYC. (E) 293T cells were transfected with FLAG-tagged human wild-type or MYC mutants deleted in amino acid residues 1-110, 129-145, 20-48, 24-31, 33-38 and 38-48, or vector control. Bottom Panel shows western blots indicating input proteins and top panel shows western blot analysis of indicated lysates immunoprecipitated with Flag or TERT antibody. Red arterisk indicates no interaction. (F) Left panel: Bacterially expressed GST, pGex2T-MYC (1-108 aa) or pGex3X-MYC (98-439 aa) proteins were incubated with whole cell lysates from Hela with control or TERT overexpression. Following incubation, the mixture was immunoprecipitated with GST antobody and immunoblotted (IB) with TERT. Right Panel: Coomasie Blue staining of Purified MYC proteins (1-108 aa) and (98-439 aa) along with GST expressed from a control vector (GST). (G) 293T cells were transfected with indicated proteins and checked for gene expression. (H) 293T cells were transfected with FLAG-tagged human wild-type , dominant negative or TERT mutants deleted in amino acid residues 1-600, 101-1127, 1-925, 350-925 or Flag vector control. The bottom panel shows western blots indicating input proteins and top panel shows western blot analysis of indicated lysates immunoprecipitated with Flag antibody. For the western blots, representative images of n=3 independent experiments are shown. One way ANOVA with Tukey's Multiple Comparison Test was used, and * indicates $p<0.05$ vs. Vector, ** indicates $p<0.01$ vs. Vector, ^ indicates a non-significant p-value vs. Vector.

Supplementary Figure 6: (A) Western blots showing MYC levels following cycloheximide treatment (CHX) for the indicated time points in P493 cells infected with shControl, shTERT 2 and 3. (B) Western blots showing MYC levels upon cycloheximide treatment (CHX) for indicated time points in 293T cells transfected with Flag-MYC T58A and shControl or shTERT1. (C) Gene expression analysis in cells transfected with the indicated plasmids. Target genes are indicated on x-axis. (D) In vivo MYC ubiquitination assay in cells transfected with shTERT and Flag MYC along with HA-Ub. (E) 293T cells were transfected with Flag-MYC Δ 1-110, His-ubiquitin along with shControl or shTERT 1. 48 h post transfection, the cells were harvested, immunoprecipitated with Ni-NTA beads (IP:HIS), and western blotted with Flag. The right panel shows the inputs. One way ANOVA with Tukey's Multiple Comparison Test was used. * indicates $p<0.05$ vs. shControl, ** indicates $p<0.01$ vs. shControl, ^ indicates not significant vs. shControl, $^{\#\#}$ indicates $p<0.01$ vs. shTERT + vector. For the western blots, representative images of n=3 independent experiments are shown.

Supplementary Figure 7: Vector and TERT overexpressing P493 cells were transfected with siControl or siBrg1 for 48h. A) panel shows relative Brg1 expession. B) panel shows gene expression in the various transfected conditions.

SUPPLEMENTARY TABLES

Supplementary Table 1. shRNA sequences.

Gene	shRNA sequence
shTERT-A	TTCTGTCATCTACAAACTCGAGTTTGTAGATGACAGAA
shTERT-B	ACTATGAGCGGACAAACTCGAGTTTGTCCGCTCATAGT
shTERT 1	CATTTCATCAGCAAGTTTGA
shTERT 2	GAAGAGTGTCTGGAGCAAGTT
shTERT 3 (targets 3' UTR)	TGAGGCCTGAGTGAGTGTTTG

Supplementary Table 2. qPCR primers for gene expression analysis.

Human		
Gene	Forward Primer	Reverse Primer
PKM2	TGCGAGCCTCAAGTCACTCCAC	TCACGGCACAGGAACAACACG
LDHA	GGCCTGTGCCATCAGTATCT	ACCAGCTTGGAGTTTGCAGT
ALDOC	AAATTGGGGTGGAAAACACA	ACCCTTGTCAACCTTGATGC
HK2	TCTATGCCATCCCTGAGGAC	TCTCTGCCTTCCACTCCACT
GAPDH	GGCGATGCTGGCGCTGAGTA	ACAGTTTCCCGGAGGGGCCA
c-MYC	ACGGCCGACCAGCTGGAGAT	TCGGGCTGCCGCTGTCTTTG
TERT	CCAAGTTCCTGGACTGGCTGA	TTCCCGATGCTGCCTGAC
CYCLIN D2	AGTGCGTGCAGAAGGACATC	GTTGCAGATGGGACTTCGGA
CYCLIN D1	GTGCTGCGAAGTGGAAACCATC	GACCTCCTTCTGCACACATTTGA
CDK4	GCCTTCCCATCAGCACAGTTC	GTCTACATGCTCAAACACCAGGG
eIF2a	ATGGGACCTTGTTTGCCTGG	CCACGTTGCCAGGACAGTAT
45s rRNA	GAACGGTGGTGTGTCGTTC	GCGTCTCGTCTCGTCTCACT
5.8s rRNA	ACTCGGCTCGTGCGTC	GCGACGCTCAGACAGG
BRG1	ACCAGATGCACAAGCCCATG	GCTGGAACTGGACTAGAGGC
β-Actin	GCCAACCGCGAGAAGATGA	CCATCACGATGCCAGTGGTA

MOUSE		
Gene	Forward primer	Reverse primer
TERT	GGATTGCCACTGGCTCCG	TGCCTGACCTCCTCTTGTGAC
45s rRNA	CGCCCGCGTGTTGGTCTTCT	CCCAAAACCCCGACGAGCCC
5.8s rRNA	ACTCGGCTCGTGCGTC	GCGACGCTCAGACAGG
18s rRNA	GCCTGCTGCCTTCCTTGG	GATGGTAGTCGCCGTGCC
28s rRNA	AGAGGTAAACGGGTGGGGTC	GGGGTCGGGAGGAACGG
GAPDH	CATCTTCTTGTGCAGTGCCAG	GGCAACAATCTCCACTTTGCC
ENO1	GAGCGAGAAGTCCTGCAACT	CTGCGATGAAAGTGTCCTCA

LDHA	AGACAAACTCAAGGGCGAGA	GCGGTGATAATGACCAGCTT
PKM2	TGACACCTTCCTGGAACACA	TTCAGCATCTCCACAGATCG
EXOSC2	GCTCCTCTCATCCATGAACCT	CAGCTCCATCCGAGAACACA
GART	CGTCATTGCTGGAATTGCT	TTGGGCATCTCTGCTGTCT
CCT7	CCAGTTATCCTGTTGAAAGAGGG	GACCCAGGGTGGTTCTTACA
MCM6	GCTGTTCCTAGACTTCCTGGA	CAACCAGCGTGTTTCTCTCAG
MYBBP1A	GCCGCGAGTTCTTGGACTT	ATCTCCGAATCATTGGGCCTT
β-Actin	CAGCTTCTTTGCAGCTCCTT	CAGCTTCTTTGCAGCTCCTT

Supplementary Table 3. ChIP primers.

Human		
Gene	Forward Primer	Reverse Primer
LDHA	GGAGGGCAGCACCTTACTTA	AGGGGCCTTAAGTGGAACAG
CDK4	GAGCGACCCTTCCATAACCA	GGGCTGGCGTGAGGTAAGT
HK2	GATTGCCTCGCATCTGC	AGCCACGATTCTCTCCACG
PKM2	TTTGGAGGAGTCTGCAAAGG	CACTCCCAAGGACCAAGTGT
TERT	GCGCGAGTTTCAGGCAG	CACCTCGCGGTAGTGGCT
rDNA (H1)	GGCGGTTTGAGTGAGACGAGA	ACGTGCGCTCACCGAGAGCAG
rDNA (H4)	CGACGACCCATTCGAACGTCT	CTCTCCGGAATCGAACCCTGA
ZNF77	GCACCCCTGATTGGAGAAT	TCAGAGACGTTAATCCGAAGC
JMJD2B	CTGAGGCTCCCTTGTCAATC	CGGCTCTGTTCTCATTGGAG
RUVBL2	GAGGAGGAGGGTGGGATAAA	GGCCGATTGCAAAATTCTTA

Mouse		
Gene	Forward Primer	Reverse Primer
BXDC1	GATCCCTTAGCGAATGCACG	GGCTTCCCGGAAGTAATCG

GART	ACCTCCATCAAGGCCGTGC	GTGACTGGCGAAAAGCCCAC
HSPD1	CGCCACACGTGATGAAACC	TCGGCTCACTTGTCCAGGC
MYBBP1A	AGCCCACGTGTTTGGCTC	GGGCTCTTCATCTCCGCC

Supplementary Table 4. Statistical analysis.

Statistics for Figure 1D				
One-way analysis of variance				
P value	P<0.0001			
P value summary	***			
Are means signif. different? (P < 0.05)	Yes			
Number of groups	7			
F	8.334			
R squared	0.685			
ANOVA Table	SS	df	MS	
Treatment (between columns)	2.12	6	0.3533	
Residual (within columns)	0.975	23	0.04239	
Total	3.095	29		
Dunnett's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
Control vs shTERT-A	0.4878	3.351	P < 0.05	0.08453 to 0.8911
Control vs shTERT-B	0.6385	4.385	P < 0.01	0.2352 to 1.042
Control vs shTERC	0.05953	0.4089	P > 0.05	-0.3437 to 0.4628
Control vs TERT	-0.02415	0.1659	P > 0.05	-0.4274 to 0.3791
Control vs TERT; shTERT-A	0.05812	0.4208	P > 0.05	-0.3245 to 0.4407
Control vs TERT; shTERT-B	-0.1416	1.025	P > 0.05	-0.5242 to 0.2410

Statistics for Fig S1B					
ANOVA summary					
F	127.1				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significant	Yes				
R square	0.9769				
Brown-Forsythe test					
F (DFn, DFd)	1.724 (5, 15)				
P value	0.1898				
P value summary	ns				
Significantly different standard deviations? (P < 0.05	No				
Bartlett's test					
Bartlett's statistic (corrected)					
P value					
P value summary					
Significantly different standard deviations? (P < 0.05)					
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	1.743	5	0.3485	F (5, 15) = 1	P < 0.0001
Residual (within columns)	0.04113	15	0.002742		
Total	1.784	20			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	21				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary	
shControl vs. shTERT-A	0.5431	0.4228 to 0.6634	Yes	****	
shControl vs. shTERT-B	0.7579	0.6376 to 0.8782	Yes	****	
shControl vs. shControl +TERT	-0.009285	-0.1392 to 0.1207	No	ns	
shControl vs. shTERT-A +TERT	0.2129	0.08299 to 0.3429	Yes	***	
shControl vs. shTERT-B +TERT	0.3765	0.2466 to 0.5065	Yes	****	
shTERT-A vs. shTERT-B	0.2148	0.09445 to 0.3351	Yes	***	
shTERT-A vs. shControl +TERT	-0.5524	-0.6823 to -0.4225	Yes	****	
shTERT-A vs. shTERT-A +TERT	-0.3302	-0.4601 to -0.2002	Yes	****	
shTERT-A vs. shTERT-B +TERT	-0.1666	-0.2965 to -0.03663	Yes	**	
shTERT-B vs. shControl +TERT	-0.7672	-0.8971 to -0.6372	Yes	****	
shTERT-B vs. shTERT-A +TERT	-0.5449	-0.6749 to -0.4150	Yes	****	
shTERT-B vs. shTERT-B +TERT	-0.3813	-0.5113 to -0.2514	Yes	****	
shControl +TERT vs. shTERT-A +TERT	0.2222	0.08331 to 0.3611	Yes	**	
shControl +TERT vs. shTERT-B +TERT	0.3858	0.2469 to 0.5247	Yes	****	
shTERT-A +TERT vs. shTERT-B +TERT	0.1636	0.02470 to 0.3025	Yes	*	
Symbol	Meaning				
ns	P > 0.05				
*	P ≤ 0.05				
**	P ≤ 0.01				
***	P ≤ 0.001				
****	P ≤ 0.0001				

Statistics for Figure S1C					
ANOVA summary					
F	159.3				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significant?	Yes				
R square	0.9779				
Brown-Forsythe test					
F (DFn, DFd)	9.867 (5, 18)				
P value	0.0001				
P value summary	***				
Significantly different standard deviations? (P < 0.05)	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	+infinity				
P value	< 0.0001				
P value summary	****				
Significantly different standard deviations? (P < 0.05)	Yes				
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	2.044	5	0.4087	F (5, 18) = 159.3	P < 0.0001
Residual (within columns)	0.04618	18	0.002566		
Total	2.09	23			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	24				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary	
Wildtype- shControl vs. Wildtype- shTERT-A	0.09126	-0.02257 to 0.2051	No	ns	
Wildtype- shControl vs. Wildtype- shTERT-B	0.12	0.006154 to 0.2338	Yes	*	
Wildtype- shControl vs. EuMYC- shControl	0	-0.1138 to 0.1138	No	ns	
Wildtype- shControl vs. EuMYC- shTERT-A	0.5431	0.4293 to 0.6569	Yes	****	
Wildtype- shControl vs. EuMYC- shTERT-B	0.7579	0.6441 to 0.8717	Yes	****	
Wildtype- shTERT-A vs. Wildtype- shTERT-B	0.02872	-0.08510 to 0.1425	No	ns	
Wildtype- shTERT-A vs. EuMYC- shControl	-0.09126	-0.2051 to 0.02257	No	ns	
Wildtype- shTERT-A vs. EuMYC- shTERT-A	0.4519	0.3380 to 0.5657	Yes	****	
Wildtype- shTERT-A vs. EuMYC- shTERT-B	0.6666	0.5528 to 0.7804	Yes	****	
Wildtype- shTERT-B vs. EuMYC- shControl	-0.12	-0.2338 to -0.006154	Yes	*	
Wildtype- shTERT-B vs. EuMYC- shTERT-A	0.4231	0.3093 to 0.5370	Yes	****	
Wildtype- shTERT-B vs. EuMYC- shTERT-B	0.6379	0.5241 to 0.7517	Yes	****	
EuMYC- shControl vs. EuMYC- shTERT-A	0.5431	0.4293 to 0.6569	Yes	****	
EuMYC- shControl vs. EuMYC- shTERT-B	0.7579	0.6441 to 0.8717	Yes	****	
EuMYC- shTERT-A vs. EuMYC- shTERT-B	0.2148	0.1009 to 0.3286	Yes	***	
Symbol	Meaning				
ns	P > 0.05				
*	P ≤ 0.05				
**	P ≤ 0.01				
***	P ≤ 0.001				
****	P ≤ 0.0001				

Statistics for Figure 2D				
WBC				
One-way analysis of variance				
P value	0.0087			
P value summary	**			
Are means signif. different? (P < 0.05)	Yes			
Number of groups	3			
F	5.206			
R squared	0.1668			
Bartlett's test for equal variances				
Bartlett's statistic (corrected)	26.79			
P value	P<0.0001			
P value summary	***			
Do the variances differ signif. (P < 0.05)	Yes			
ANOVA Table	SS	df	MS	
Treatment (between columns)	1779	2	889.6	
Residual (within columns)	8887	52	170.9	
Total	10670	54		
Dunnett's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
EuMYC; TERT+/+ vs EuMYC; TERT+/-	11.31	2.284	P < 0.05	0.02878 to 22.59
EuMYC; TERT+/+ vs EuMYC; TERT-/-	16.08	3.226	P < 0.01	4.726 to 27.44
Tumor				
One-way analysis of variance				
P value	0.0093			
P value summary	**			
Are means signif. different? (P < 0.05)	Yes			
Number of groups	3			
F	5.182			
R squared	0.1839			
Bartlett's test for equal variances				
Bartlett's statistic (corrected)	203.7			
P value	P<0.0001			
P value summary	***			
Do the variances differ signif. (P < 0.05)	Yes			
ANOVA Table	SS	df	MS	
Treatment (between columns)	62.98	2	31.49	
Residual (within columns)	279.6	46	6.077	
Total	342.5	48		
Dunnett's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
EuMYC; TERT+/+ vs EuMYC; TERT+/-	2.183	2.543	P < 0.05	0.2220 to 4.144
EuMYC; TERT+/+ vs EuMYC; TERT-/-	2.541	2.96	P < 0.01	0.5802 to 4.503
Spleen (% body weight)				
One-way analysis of variance				
P value	0.0067			
P value summary	**			
Are means signif. different? (P < 0.05)	Yes			
Number of groups	3			
F	5.598			
R squared	0.1957			
Bartlett's test for equal variances				
Bartlett's statistic (corrected)	22.74			
P value	P<0.0001			
P value summary	***			
Do the variances differ signif. (P < 0.05)	Yes			
ANOVA Table	SS	df	MS	
Treatment (between columns)	4.432	2	2.216	
Residual (within columns)	18.21	46	0.3959	
Total	22.64	48		
Dunnett's Multiple Comparison Test	Mean Diff.	q	P value	95% CI of diff
EuMYC; TERT+/+ vs EuMYC; TERT+/-	0.4721	2.154	P > 0.05	-0.02841 to 0.9727
EuMYC; TERT+/+ vs EuMYC; TERT-/-	0.7196	3.284	P < 0.01	0.2191 to 1.220

Statistics for Figure S3C					
Cyclin D1					
ANOVA summary					
F	259.4				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically sign	Yes				
R square	0.9774				
Brown-Forsythe test					
F (DFn, DFd)	3.373 (5, 30)				
P value	0.0155				
P value summary	*				
Significantly different standard deviations? (P	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	13.48				
P value	0.0193				
P value summary	*				
Significantly different standard deviations? (P	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	0.508	5	0.1016	F (5, 30) = 2	P < 0.0001
Residual (within columns)	0.01175	30	0.0003917		
Total	0.5198	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary	
shControl vs. shTERT 1	0.2711	0.2363 to 0.	Yes	****	
shControl vs. shTERT 2	0.2109	0.1762 to 0.	Yes	****	
shControl vs. shTERT 3	0.1621	0.1273 to 0.	Yes	****	
shControl vs. shTERT 3 + TERT WT	-0.009609	-0.04436 to	No	ns	
shControl vs. shTERT 3 + TERT DN	-0.03125	-0.06601 to	No	ns	
shTERT 1 vs. shTERT 2	-0.06014	-0.09489 to	Yes	***	
shTERT 1 vs. shTERT 3	-0.109	-0.1437 to -	Yes	****	
shTERT 1 vs. shTERT 3 + TERT WT	-0.2807	-0.3154 to -	Yes	****	
shTERT 1 vs. shTERT 3 + TERT DN	-0.3023	-0.3371 to -	Yes	****	
shTERT 2 vs. shTERT 3	-0.04885	-0.08361 to	Yes	**	
shTERT 2 vs. shTERT 3 + TERT WT	-0.2205	-0.2553 to -	Yes	****	
shTERT 2 vs. shTERT 3 + TERT DN	-0.2422	-0.2769 to -	Yes	****	
shTERT 3 vs. shTERT 3 + TERT WT	-0.1717	-0.2065 to -	Yes	****	
shTERT 3 vs. shTERT 3 + TERT DN	-0.1933	-0.2281 to -	Yes	****	
shTERT 3 + TERT WT vs. shTERT 3 + TERT I	-0.02164	-0.05640 to	No	ns	
Nucleolin					
ANOVA summary					
F	1375				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically sign	Yes				
R square	0.9957				
Brown-Forsythe test					
F (DFn, DFd)	4.028 (5, 30)				
P value	0.0065				
P value summary	**				
Significantly different standard deviations? (P	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	12.84				
P value	0.0249				
P value summary	*				
Significantly different standard deviations? (P	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	3.641	5	0.7282	F (5, 30) = 1	P < 0.0001
Residual (within columns)	0.01589	30	0.0005298		
Total	3.657	35			
Data summary					
Number of treatments (columns)	6				

Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary	
shControl vs. shTERT 1	0.8011	0.7607 to 0.	Yes	****	
shControl vs. shTERT 2	0.7109	0.6705 to 0.	Yes	****	
shControl vs. shTERT 3	0.6297	0.5892 to 0.	Yes	****	
shControl vs. shTERT 3 + TERT WT	0.03064	-0.009783 t	No	ns	
shControl vs. shTERT 3 + TERT DN	0.3492	0.3088 to 0.	Yes	****	
shTERT 1 vs. shTERT 2	-0.09017	-0.1306 to -	Yes	****	
shTERT 1 vs. shTERT 3	-0.1714	-0.2119 to -	Yes	****	
shTERT 1 vs. shTERT 3 + TERT WT	-0.7705	-0.8109 to -	Yes	****	
shTERT 1 vs. shTERT 3 + TERT DN	-0.4519	-0.4923 to -	Yes	****	
shTERT 2 vs. shTERT 3	-0.08127	-0.1217 to -	Yes	****	
shTERT 2 vs. shTERT 3 + TERT WT	-0.6803	-0.7207 to -	Yes	****	
shTERT 2 vs. shTERT 3 + TERT DN	-0.3617	-0.4021 to -	Yes	****	
shTERT 3 vs. shTERT 3 + TERT WT	-0.599	-0.6394 to -	Yes	****	
shTERT 3 vs. shTERT 3 + TERT DN	-0.2804	-0.3208 to -	Yes	****	
shTERT 3 + TERT WT vs. shTERT 3 + TERT I	0.3186	0.2782 to 0.	Yes	****	
eIF2a					
ANOVA summary					
F	29.64				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically sign	Yes				
R square	0.8317				
Brown-Forsythe test					
F (DFn, DFd)	2.660 (5, 30)				
P value	0.0418				
P value summary	*				
Significantly different standard deviations? (P <	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	15.12				
P value	0.0099				
P value summary	**				
Significantly different standard deviations? (P <	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	0.1289	5	0.02578	F (5, 30) = 2	P < 0.0001
Residual (within columns)	0.02609	30	0.0008697		
Total	0.155	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary	
shControl vs. shTERT 1	0.1601	0.1083 to 0.	Yes	****	
shControl vs. shTERT 2	0.1201	0.06835 to (	Yes	****	
shControl vs. shTERT 3	0.08768	0.03589 to (	Yes	***	
shControl vs. shTERT 3 + TERT WT	0.007771	-0.04402 to	No	ns	
shControl vs. shTERT 3 + TERT DN	0.02738	-0.02441 to	No	ns	
shTERT 1 vs. shTERT 2	-0.03994	-0.09173 to	No	ns	
shTERT 1 vs. shTERT 3	-0.0724	-0.1242 to -	Yes	**	
shTERT 1 vs. shTERT 3 + TERT WT	-0.1523	-0.2041 to -	Yes	****	
shTERT 1 vs. shTERT 3 + TERT DN	-0.1327	-0.1845 to -	Yes	****	
shTERT 2 vs. shTERT 3	-0.03246	-0.08425 to	No	ns	
shTERT 2 vs. shTERT 3 + TERT WT	-0.1124	-0.1642 to -	Yes	****	
shTERT 2 vs. shTERT 3 + TERT DN	-0.09276	-0.1445 to -	Yes	****	
shTERT 3 vs. shTERT 3 + TERT WT	-0.07991	-0.1317 to -	Yes	***	
shTERT 3 vs. shTERT 3 + TERT DN	-0.0603	-0.1121 to -	Yes	*	
shTERT 3 + TERT WT vs. shTERT 3 + TERT I	0.01961	-0.03218 to	No	ns	
Symbol	Meaning				
ns	P > 0.05				
*	P ≤ 0.05				

**	P ≤ 0.01				
***	P ≤ 0.001				
****	P ≤ 0.0001				

Statistics For Figure S3D					
H1					
ANOVA summary					
F	10.5				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically sign	Yes				
R square	0.6363				
Brown-Forsythe test					
F (DFn, DFd)	9.745 (5, 30)				
P value	< 0.0001				
P value summary	****				
Significantly different standard deviations? (P	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	52.59				
P value	< 0.0001				
P value summary	****				
Significantly different standard deviations? (P	Yes				
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	0.02386	5	0.004772	F (5, 30) = 10.50	P < 0.0001
Residual (within columns)	0.01364	30	0.0004547		
Total	0.0375	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary	
shControl vs. shTERT 1	0.06212	0.02467 to 0.099	Yes	***	
shControl vs. shTERT 2	0.06525	0.02781 to 0.102	Yes	***	
shControl vs. shTERT 3	0.04387	0.006428 to 0.08	Yes	*	
shControl vs. shTERT 3 + TERT WT	0.03202	-0.005430 to 0.0	No	ns	
shControl vs. shTERT 3 + TERT DN	0.00313	-0.03432 to 0.04	No	ns	
shTERT 1 vs. shTERT 2	0.003132	-0.03431 to 0.04	No	ns	
shTERT 1 vs. shTERT 3	-0.01825	-0.05569 to 0.01	No	ns	
shTERT 1 vs. shTERT 3 + TERT WT	-0.0301	-0.06755 to 0.00	No	ns	
shTERT 1 vs. shTERT 3 + TERT DN	-0.05899	-0.09644 to -0.02	Yes	***	
shTERT 2 vs. shTERT 3	-0.02138	-0.05882 to 0.01	No	ns	
shTERT 2 vs. shTERT 3 + TERT WT	-0.03324	-0.07068 to 0.00	No	ns	
shTERT 2 vs. shTERT 3 + TERT DN	-0.06212	-0.09957 to -0.02	Yes	***	
shTERT 3 vs. shTERT 3 + TERT WT	-0.01186	-0.04930 to 0.02	No	ns	
shTERT 3 vs. shTERT 3 + TERT DN	-0.04074	-0.07819 to -0.00	Yes	*	
shTERT 3 + TERT WT vs. shTERT 3 + TERT	-0.02889	-0.06633 to 0.00	No	ns	
H4					
ANOVA summary					
F	101				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically sign	Yes				
R square	0.9439				
Brown-Forsythe test					
F (DFn, DFd)	6.367 (5, 30)				
P value	0.0004				
P value summary	***				
Significantly different standard deviations? (P	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	11.22				
P value	0.0473				
P value summary	*				
Significantly different standard deviations? (P	Yes				
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Treatment (between columns)	0.004544	5	0.0009088	F (5, 30) = 101.0	P < 0.0001
Residual (within columns)	0.00027	30	8.999E-06		
Total	0.004814	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary	
shControl vs. shTERT 1	0.03145	0.02618 to 0.036	Yes	****	
shControl vs. shTERT 2	0.02809	0.02282 to 0.033	Yes	****	
shControl vs. shTERT 3	0.01275	0.007478 to 0.01	Yes	****	
shControl vs. shTERT 3 + TERT WT	0.006111	0.0008431 to 0.0	Yes	*	
shControl vs. shTERT 3 + TERT DN	0.01248	0.007209 to 0.01	Yes	****	
shTERT 1 vs. shTERT 2	-0.003361	-0.008629 to 0.0	No	ns	
shTERT 1 vs. shTERT 3	-0.01871	-0.02397 to -0.01	Yes	****	
shTERT 1 vs. shTERT 3 + TERT WT	-0.02534	-0.03061 to -0.02	Yes	****	
shTERT 1 vs. shTERT 3 + TERT DN	-0.01897	-0.02424 to -0.01	Yes	****	
shTERT 2 vs. shTERT 3	-0.01534	-0.02061 to -0.01	Yes	****	
shTERT 2 vs. shTERT 3 + TERT WT	-0.02198	-0.02725 to -0.01	Yes	****	
shTERT 2 vs. shTERT 3 + TERT DN	-0.01561	-0.02088 to -0.01	Yes	****	
shTERT 3 vs. shTERT 3 + TERT WT	-0.006635	-0.01190 to -0.00	Yes	**	
shTERT 3 vs. shTERT 3 + TERT DN	-0.000269	-0.005537 to 0.0	No	ns	
shTERT 3 + TERT WT vs. shTERT 3 + TERT	0.006366	0.001098 to 0.01	Yes	*	
Symbol	Meaning				
ns	P > 0.05				
*	P ≤ 0.05				
**	P ≤ 0.01				
***	P ≤ 0.001				
****	P ≤ 0.0001				

Satistics for Figure S3H					
45s					
ANOVA summary					
F	339.9				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significa	Yes				
R square	0.9831				
Brown-Forsythe test					
F (DFn, DFd)	2.795 (6, 35)				
P value	0.025				
P value summary	*				
Significantly different standard deviations? (P < 0.	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	12.17				
P value	0.0583				
P value summary	ns				
Significantly different standard deviations? (P < 0.	No				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	5.808	6	0.968	F (6, 35) = 3	P < 0.0001
Residual (within columns)	0.09967	35	0.002848		
Total	5.908	41			
Data summary					
Number of treatments (columns)	7				
Number of values (total)	42				
Number of families	1				
Number of comparisons per family	21				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary	
shControl vs. shTerc	0.1064	0.01012 to 0.2027	Yes	*	
shControl vs. shTERT 1	0.7507	0.6544 to 0.8471	Yes	****	
shControl vs. shTERT 2	0.7547	0.6584 to 0.8510	Yes	****	
shControl vs. shTERT 3	0.2289	0.1326 to 0.3252	Yes	****	
shControl vs. shTERT 3 + TERT WT	-0.299	-0.3954 to -0.2027	Yes	****	
shControl vs. shTERT 3 + TERT DN	-0.04436	-0.1407 to 0.05195	No	ns	
shTerc vs. shTERT 1	0.6443	0.5480 to 0.7406	Yes	****	
shTerc vs. shTERT 2	0.6483	0.5520 to 0.7446	Yes	****	
shTerc vs. shTERT 3	0.1225	0.02618 to 0.2188	Yes	**	
shTerc vs. shTERT 3 + TERT WT	-0.4055	-0.5018 to -0.3092	Yes	****	
shTerc vs. shTERT 3 + TERT DN	-0.1508	-0.2471 to -0.0544	Yes	***	
shTERT 1 vs. shTERT 2	0.003955	-0.09236 to 0.1003	No	ns	
shTERT 1 vs. shTERT 3	-0.5218	-0.6181 to -0.4255	Yes	****	
shTERT 1 vs. shTERT 3 + TERT WT	-1.05	-1.146 to -0.9535	Yes	****	
shTERT 1 vs. shTERT 3 + TERT DN	-0.7951	-0.8914 to -0.6988	Yes	****	
shTERT 2 vs. shTERT 3	-0.5258	-0.6221 to -0.4295	Yes	****	
shTERT 2 vs. shTERT 3 + TERT WT	-1.054	-1.150 to -0.9574	Yes	****	
shTERT 2 vs. shTERT 3 + TERT DN	-0.7991	-0.8954 to -0.7027	Yes	****	
shTERT 3 vs. shTERT 3 + TERT WT	-0.528	-0.6243 to -0.4317	Yes	****	
shTERT 3 vs. shTERT 3 + TERT DN	-0.2733	-0.3696 to -0.1770	Yes	****	
shTERT 3 + TERT WT vs. shTERT 3 + TERT DN	0.2547	0.1584 to 0.3510	Yes	****	

5.8s					
ANOVA summary					
F	103.9				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significa	Yes				
R square	0.9468				
Brown-Forsythe test					
F (DFn, DFd)	2.689 (6, 35)				
P value	0.0298				
P value summary	*				
Significantly different standard deviations? (P < 0.	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	40.16				
P value	< 0.0001				
P value summary	****				
Significantly different standard deviations? (P < 0.	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	4.555	6	0.7592	F (6, 35) = 1	P < 0.0001
Residual (within columns)	0.2558	35	0.007308		
Total	4.811	41			
Data summary					
Number of treatments (columns)	7				
Number of values (total)	42				
Number of families	1				
Number of comparisons per family	21				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary	
shControl vs. shTerc	0.1395	-0.01481 to 0.2938	No	ns	
shControl vs. shTERT 1	0.7017	0.5474 to 0.8560	Yes	****	
shControl vs. shTERT 2	0.6847	0.5305 to 0.8390	Yes	****	
shControl vs. shTERT 3	0.3528	0.1985 to 0.5071	Yes	****	
shControl vs. shTERT 3 + TERT WT	-0.2722	-0.4265 to -0.1179	Yes	****	
shControl vs. shTERT 3 + TERT DN	0.1598	0.005553 to 0.314	Yes	*	
shTerc vs. shTERT 1	0.5623	0.4080 to 0.7165	Yes	****	
shTerc vs. shTERT 2	0.5453	0.3910 to 0.6996	Yes	****	
shTerc vs. shTERT 3	0.2133	0.05902 to 0.3676	Yes	**	
shTerc vs. shTERT 3 + TERT WT	-0.4117	-0.5660 to -0.2574	Yes	****	
shTerc vs. shTERT 3 + TERT DN	0.02037	-0.1339 to 0.1747	No	ns	
shTERT 1 vs. shTERT 2	-0.01699	-0.1713 to 0.1373	No	ns	
shTERT 1 vs. shTERT 3	-0.349	-0.5032 to -0.1947	Yes	****	
shTERT 1 vs. shTERT 3 + TERT WT	-0.974	-1.128 to -0.8197	Yes	****	
shTERT 1 vs. shTERT 3 + TERT DN	-0.5419	-0.6962 to -0.3876	Yes	****	
shTERT 2 vs. shTERT 3	-0.332	-0.4863 to -0.1777	Yes	****	
shTERT 2 vs. shTERT 3 + TERT WT	-0.957	-1.111 to -0.8027	Yes	****	
shTERT 2 vs. shTERT 3 + TERT DN	-0.5249	-0.6792 to -0.3706	Yes	****	
shTERT 3 vs. shTERT 3 + TERT WT	-0.625	-0.7793 to -0.4707	Yes	****	
shTERT 3 vs. shTERT 3 + TERT DN	-0.1929	-0.3472 to -0.0386	Yes	**	
shTERT 3 + TERT WT vs. shTERT 3 + TERT DN	0.4321	0.2778 to 0.5864	Yes	****	
Symbol	Meaning				
ns	P > 0.05				
*	P ≤ 0.05				
**	P ≤ 0.01				
***	P ≤ 0.001				
****	P ≤ 0.0001				

Statistics for Figure S3I						
Cyclin D1						
ANOVA summary						
F	552.9					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.9896					
Brown-Forsythe test						
F (DFn, DFd)	5.059 (6, 35)					
P value	0.0008					
P value summary	***					
Significantly different standard deviations? (P < 0.05)	Yes					
Bartlett's test						
Bartlett's statistic (corrected)	18.39					
P value	0.0053					
P value summary	**					
Significantly different standard deviations? (P < 0.05)	Yes					
ANOVA table	SS	DF	MS	F (DFn, DF	P value	
Treatment (between columns)	52.68	6	8.781	F (6, 35) = 5	P < 0.0001	
Residual (within columns)	0.5558	35	0.01588			
Total	53.24	41				
Data summary						
Number of treatments (columns)	7					
Number of values (total)	42					
Number of families	1					
Number of comparisons per family	21					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary		
shControl vs. shTerc	0.0399	-0.1875 to 0	No	ns		
shControl vs. shTERT 1	0.4799	0.2524 to 0	Yes	****		
shControl vs. shTERT 2	0.5629	0.3355 to 0	Yes	****		
shControl vs. shTERT 3	0.5643	0.3369 to 0	Yes	****		
shControl vs. shTERT 3 + TERT WT	-2.51	-2.738 to -2	Yes	****		
shControl vs. shTERT 3 + TERT DN	-1.567	-1.794 to -1	Yes	****		
shTerc vs. shTERT 1	0.44	0.2125 to 0	Yes	****		
shTerc vs. shTERT 2	0.523	0.2956 to 0	Yes	****		
shTerc vs. shTERT 3	0.5244	0.2970 to 0	Yes	****		
shTerc vs. shTERT 3 + TERT WT	-2.55	-2.778 to -2	Yes	****		
shTerc vs. shTERT 3 + TERT DN	-1.607	-1.834 to -1	Yes	****		
shTERT 1 vs. shTERT 2	0.08304	-0.1444 to 0	No	ns		
shTERT 1 vs. shTERT 3	0.08442	-0.1430 to 0	No	ns		
shTERT 1 vs. shTERT 3 + TERT WT	-2.99	-3.218 to -2	Yes	****		
shTERT 1 vs. shTERT 3 + TERT DN	-2.047	-2.274 to -1	Yes	****		
shTERT 2 vs. shTERT 3	0.001388	-0.2260 to 0	No	ns		
shTERT 2 vs. shTERT 3 + TERT WT	-3.073	-3.301 to -2	Yes	****		
shTERT 2 vs. shTERT 3 + TERT DN	-2.13	-2.357 to -1	Yes	****		
shTERT 3 vs. shTERT 3 + TERT WT	-3.075	-3.302 to -2	Yes	****		
shTERT 3 vs. shTERT 3 + TERT DN	-2.131	-2.359 to -1	Yes	****		
shTERT 3 + TERT WT vs. shTERT 3 + TERT DN	0.9437	0.7162 to 1	Yes	****		

eIF2a						
ANOVA summary						
F	212.5					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.9733					
Brown-Forsythe test						
F (DFn, DFd)	3.711 (6, 35)					
P value	0.0058					
P value summary	**					
Significantly different standard deviations? (P < 0.05)	Yes					
Bartlett's test						
Bartlett's statistic (corrected)	48.54					
P value	< 0.0001					
P value summary	****					
Significantly different standard deviations? (P < 0.05)	Yes					
ANOVA table	SS	DF	MS	F (DFn, DF	P value	
Treatment (between columns)	8.832	6	1.472	F (6, 35) = 2	P < 0.0001	
Residual (within columns)	0.2424	35	0.006926			
Total	9.075	41				
Data summary						
Number of treatments (columns)	7					
Number of values (total)	42					
Number of families	1					
Number of comparisons per family	21					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary		
shControl vs. shTerc	0.1912	0.04098 to (	Yes	**		
shControl vs. shTERT 1	0.8026	0.6524 to 0.	Yes	****		
shControl vs. shTERT 2	0.7751	0.6249 to 0.	Yes	****		
shControl vs. shTERT 3	0.7009	0.5507 to 0.	Yes	****		
shControl vs. shTERT 3 + TERT WT	-0.5054	-0.6556 to -	Yes	****		
shControl vs. shTERT 3 + TERT DN	0.008598	-0.1416 to (	No	ns		
shTerc vs. shTERT 1	0.6114	0.4612 to 0.	Yes	****		
shTerc vs. shTERT 2	0.5839	0.4337 to 0.	Yes	****		
shTerc vs. shTERT 3	0.5098	0.3596 to 0.	Yes	****		
shTerc vs. shTERT 3 + TERT WT	-0.6965	-0.8467 to -	Yes	****		
shTerc vs. shTERT 3 + TERT DN	-0.1826	-0.3328 to -	Yes	**		
shTERT 1 vs. shTERT 2	-0.02751	-0.1777 to (	No	ns		
shTERT 1 vs. shTERT 3	-0.1016	-0.2518 to (	No	ns		
shTERT 1 vs. shTERT 3 + TERT WT	-1.308	-1.458 to -1	Yes	****		
shTERT 1 vs. shTERT 3 + TERT DN	-0.794	-0.9442 to -	Yes	****		
shTERT 2 vs. shTERT 3	-0.07411	-0.2243 to (	No	ns		
shTERT 2 vs. shTERT 3 + TERT WT	-1.28	-1.431 to -1	Yes	****		
shTERT 2 vs. shTERT 3 + TERT DN	-0.7665	-0.9167 to -	Yes	****		
shTERT 3 vs. shTERT 3 + TERT WT	-1.206	-1.356 to -1	Yes	****		
shTERT 3 vs. shTERT 3 + TERT DN	-0.6923	-0.8425 to -	Yes	****		
shTERT 3 + TERT WT vs. shTERT 3 + TERT DN	0.514	0.3638 to 0.	Yes	****		

Nucleolin						
ANOVA summary						
F	464.2					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.9876					
Brown-Forsythe test						
F (DFn, DFd)	3.444 (6, 35)					
P value	0.0089					
P value summary	**					
Significantly different standard deviations? (P < 0.05)	Yes					
Bartlett's test						
Bartlett's statistic (corrected)	25.04					
P value	0.0003					
P value summary	***					
Significantly different standard deviations? (P < 0.05)	Yes					
ANOVA table	SS	DF	MS	F (DFn, DF	P value	
Treatment (between columns)	5.624	6	0.9374	F (6, 35) = 4	P < 0.0001	
Residual (within columns)	0.07068	35	0.002019			
Total	5.695	41				
Data summary						
Number of treatments (columns)	7					
Number of values (total)	42					
Number of families	1					
Number of comparisons per family	21					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary		
shControl vs. shTerc	0.09781	0.01671 to (	Yes	**		
shControl vs. shTERT 1	0.7376	0.6565 to 0.	Yes	****		
shControl vs. shTERT 2	0.7525	0.6714 to 0.	Yes	****		
shControl vs. shTERT 3	0.6891	0.6080 to 0.	Yes	****		
shControl vs. shTERT 3 + TERT WT	-0.2041	-0.2852 to -	Yes	****		
shControl vs. shTERT 3 + TERT DN	0.2038	0.1227 to 0.	Yes	****		
shTerc vs. shTERT 1	0.6397	0.5586 to 0.	Yes	****		
shTerc vs. shTERT 2	0.6546	0.5735 to 0.	Yes	****		
shTerc vs. shTERT 3	0.5913	0.5102 to 0.	Yes	****		
shTerc vs. shTERT 3 + TERT WT	-0.3019	-0.3830 to -	Yes	****		
shTerc vs. shTERT 3 + TERT DN	0.106	0.02486 to (	Yes	**		
shTERT 1 vs. shTERT 2	0.0149	-0.06620 to	No	ns		
shTERT 1 vs. shTERT 3	-0.04842	-0.1295 to 0	No	ns		
shTERT 1 vs. shTERT 3 + TERT WT	-0.9417	-1.023 to -0.	Yes	****		
shTERT 1 vs. shTERT 3 + TERT DN	-0.5338	-0.6149 to -	Yes	****		
shTERT 2 vs. shTERT 3	-0.06332	-0.1444 to 0	No	ns		
shTERT 2 vs. shTERT 3 + TERT WT	-0.9566	-1.038 to -0.	Yes	****		
shTERT 2 vs. shTERT 3 + TERT DN	-0.5487	-0.6298 to -	Yes	****		
shTERT 3 vs. shTERT 3 + TERT WT	-0.8932	-0.9743 to -	Yes	****		
shTERT 3 vs. shTERT 3 + TERT DN	-0.4854	-0.5665 to -	Yes	****		
shTERT 3 + TERT WT vs. shTERT 3 + TERT DN	0.4079	0.3268 to 0.	Yes	****		
Symbol	Meaning					
ns	P > 0.05					
*	P ≤ 0.05					
**	P ≤ 0.01					
***	P ≤ 0.001					
****	P ≤ 0.0001					

Statistics for Figure S3J						
ENO1						
ANOVA summary						
F	22.27					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.8991					
Brown-Forsythe test						
F (DFn, DFd)	1.941 (4, 10)					
P value	0.1801					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						
Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	1.51	4	0.3776	F (4, 10) = 22.27	P < 0.0001	
Residual (within columns)	0.1695	10	0.01695			
Total	1.68	14				
Data summary						
Number of treatments (columns)	5					
Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.3277	-0.02213 to 0.6776	No	ns		
shControl vs. shTERT-B	0.6004	0.2505 to 0.9502	Yes	**		
shControl vs. shTERT-A +TERT	-0.1937	-0.5436 to 0.1561	No	ns		
shControl vs. shTERT-B +TERT	-0.224	-0.5738 to 0.1259	No	ns		
shTERT-A vs. shTERT-B	0.2726	-0.07724 to 0.6225	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.5215	-0.8713 to -0.1716	Yes	**		
shTERT-A vs. shTERT-B +TERT	-0.5517	-0.9016 to -0.2019	Yes	**		
shTERT-B vs. shTERT-A +TERT	-0.7941	-1.144 to -0.4442	Yes	***		
shTERT-B vs. shTERT-B +TERT	-0.8243	-1.174 to -0.4745	Yes	***		
shTERT-A +TERT vs. shTERT-B +TERT	-0.03024	-0.3801 to 0.3196	No	ns		
GAPDH						
ANOVA summary						
F	25.59					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.911					
Brown-Forsythe test						
F (DFn, DFd)	2.065 (4, 10)					
P value	0.1607					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						
Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	2.339	4	0.5846	F (4, 10) = 25.59	P < 0.0001	
Residual (within columns)	0.2285	10	0.02285			
Total	2.567	14				
Data summary						
Number of treatments (columns)	5					
Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.4051	-0.001103 to 0.8112	No	ns		

shControl vs. shTERT-B	0.5333	0.1272 to 0.9395	Yes	*		
shControl vs. shTERT-A +TERT	-0.4203	-0.8265 to -0.01417	Yes	*		
shControl vs. shTERT-B +TERT	-0.3966	-0.8027 to 0.009606	No	ns		
shTERT-A vs. shTERT-B	0.1283	-0.2779 to 0.5344	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.8254	-1.232 to -0.4192	Yes	***		
shTERT-A vs. shTERT-B +TERT	-0.8016	-1.208 to -0.3955	Yes	***		
shTERT-B vs. shTERT-A +TERT	-0.9537	-1.360 to -0.5475	Yes	***		
shTERT-B vs. shTERT-B +TERT	-0.9299	-1.336 to -0.5237	Yes	***		
shTERT-A +TERT vs. shTERT-B +TERT	0.02377	-0.3824 to 0.4299	No	ns		
LDHA						
ANOVA summary						
F	21.76					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.897					
Brown-Forsythe test						
F (DFn, DFd)	1.079 (4, 10)					
P value	0.4171					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						
Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	1.292	4	0.3229	F (4, 10) = 21.76	P < 0.0001	
Residual (within columns)	0.1484	10	0.01484			
Total	1.44	14				
Data summary						
Number of treatments (columns)	5					
Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.4054	0.07808 to 0.7327	Yes	*		
shControl vs. shTERT-B	0.4699	0.1426 to 0.7973	Yes	**		
shControl vs. shTERT-A +TERT	-0.2933	-0.6206 to 0.03401	No	ns		
shControl vs. shTERT-B +TERT	-0.08896	-0.4163 to 0.2383	No	ns		
shTERT-A vs. shTERT-B	0.06456	-0.2627 to 0.3919	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.6987	-1.026 to -0.3714	Yes	***		
shTERT-A vs. shTERT-B +TERT	-0.4943	-0.8217 to -0.1670	Yes	**		
shTERT-B vs. shTERT-A +TERT	-0.7632	-1.091 to -0.4359	Yes	***		
shTERT-B vs. shTERT-B +TERT	-0.5589	-0.8862 to -0.2316	Yes	**		
shTERT-A +TERT vs. shTERT-B +TERT	0.2043	-0.1230 to 0.5316	No	ns		
PKM2						
ANOVA summary						
F	21.66					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.8965					
Brown-Forsythe test						
F (DFn, DFd)	1.137 (4, 10)					
P value	0.3932					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						
Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	1.2	4	0.3	F (4, 10) = 21.66	P < 0.0001	
Residual (within columns)	0.1385	10	0.01385			
Total	1.339	14				
Data summary						
Number of treatments (columns)	5					

Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.3533	0.03699 to 0.6695	Yes	*		
shControl vs. shTERT-B	0.4049	0.08862 to 0.7212	Yes	*		
shControl vs. shTERT-A +TERT	-0.2754	-0.5917 to 0.04084	No	ns		
shControl vs. shTERT-B +TERT	-0.2215	-0.5378 to 0.09474	No	ns		
shTERT-A vs. shTERT-B	0.05162	-0.2646 to 0.3679	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.6287	-0.9450 to -0.3124	Yes	***		
shTERT-A vs. shTERT-B +TERT	-0.5748	-0.8911 to -0.2585	Yes	***		
shTERT-B vs. shTERT-A +TERT	-0.6803	-0.9966 to -0.3640	Yes	***		
shTERT-B vs. shTERT-B +TERT	-0.6264	-0.9427 to -0.3101	Yes	***		
shTERT-A +TERT vs. shTERT-B +TERT	0.0539	-0.2624 to 0.3702	No	ns		
EXOSC2						
ANOVA summary						
F	45.94					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.9484					
Brown-Forsythe test						
F (DFn, DFd)	0.9306 (4, 10)					
P value	0.4843					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						
Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	0.6278	4	0.157	F (4, 10) = 45.94	P < 0.0001	
Residual (within columns)	0.03416	10	0.003416			
Total	0.662	14				
Data summary						
Number of treatments (columns)	5					
Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.3257	0.1687 to 0.4828	Yes	***		
shControl vs. shTERT-B	0.3843	0.2272 to 0.5413	Yes	****		
shControl vs. shTERT-A +TERT	-0.128	-0.2851 to 0.02906	No	ns		
shControl vs. shTERT-B +TERT	-0.02698	-0.1840 to 0.1301	No	ns		
shTERT-A vs. shTERT-B	0.05855	-0.09851 to 0.2156	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.4537	-0.6108 to -0.2967	Yes	****		
shTERT-A vs. shTERT-B +TERT	-0.3527	-0.5098 to -0.1956	Yes	***		
shTERT-B vs. shTERT-A +TERT	-0.5123	-0.6693 to -0.3552	Yes	****		
shTERT-B vs. shTERT-B +TERT	-0.4113	-0.5683 to -0.2542	Yes	****		
shTERT-A +TERT vs. shTERT-B +TERT	0.101	-0.05604 to 0.2581	No	ns		
MCM6						
ANOVA summary						
F	7.248					
P value	0.0052					
P value summary	**					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.7435					
Brown-Forsythe test						
F (DFn, DFd)	1.198 (4, 10)					
P value	0.3699					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						

Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	0.6358	4	0.1589	F (4, 10) = 7.248	P = 0.0052	
Residual (within columns)	0.2193	10	0.02193			
Total	0.8551	14				
Data summary						
Number of treatments (columns)	5					
Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.2131	-0.1848 to 0.6111	No	ns		
shControl vs. shTERT-B	0.4103	0.01237 to 0.8083	Yes	*		
shControl vs. shTERT-A +TERT	-0.1781	-0.5760 to 0.2199	No	ns		
shControl vs. shTERT-B +TERT	-0.03014	-0.4281 to 0.3678	No	ns		
shTERT-A vs. shTERT-B	0.1972	-0.2008 to 0.5951	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.3912	-0.7892 to 0.006713	No	ns		
shTERT-A vs. shTERT-B +TERT	-0.2433	-0.6412 to 0.1547	No	ns		
shTERT-B vs. shTERT-A +TERT	-0.5884	-0.9863 to -0.1905	Yes	**		
shTERT-B vs. shTERT-B +TERT	-0.4405	-0.8384 to -0.04251	Yes	*		
shTERT-A +TERT vs. shTERT-B +TERT	0.1479	-0.2500 to 0.5459	No	ns		
MYBBP1A						
ANOVA summary						
F	11.51					
P value	0.0009					
P value summary	***					
Are differences among means statistically significant? (P < 0.05)	Yes					
R square	0.8215					
Brown-Forsythe test						
F (DFn, DFd)	2.284 (4, 10)					
P value	0.132					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)						
P value						
P value summary						
Significantly different standard deviations? (P < 0.05)						
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value	
Treatment (between columns)	0.9369	4	0.2342	F (4, 10) = 11.51	P = 0.0009	
Residual (within columns)	0.2036	10	0.02036			
Total	1.14	14				
Data summary						
Number of treatments (columns)	5					
Number of values (total)	15					
Number of families	1					
Number of comparisons per family	10					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of diff.	Significant?	Summary		
shControl vs. shTERT-A	0.3446	-0.03879 to 0.7280	No	ns		
shControl vs. shTERT-B	0.4101	0.02671 to 0.7935	Yes	*		
shControl vs. shTERT-A +TERT	-0.1641	-0.5475 to 0.2193	No	ns		
shControl vs. shTERT-B +TERT	-0.1795	-0.5629 to 0.2039	No	ns		
shTERT-A vs. shTERT-B	0.0655	-0.3179 to 0.4489	No	ns		
shTERT-A vs. shTERT-A +TERT	-0.5087	-0.8921 to -0.1253	Yes	**		
shTERT-A vs. shTERT-B +TERT	-0.5241	-0.9075 to -0.1407	Yes	**		
shTERT-B vs. shTERT-A +TERT	-0.5742	-0.9576 to -0.1908	Yes	**		
shTERT-B vs. shTERT-B +TERT	-0.5896	-0.9730 to -0.2062	Yes	**		
shTERT-A +TERT vs. shTERT-B +TERT	-0.01544	-0.3988 to 0.3679	No	ns		

Statistics for Figure 4A								
HK2								
ANOVA summary								
F	18.65							
P value	< 0.0001							
P value summary	****							
Are differences among means statistica	Yes							
R square	0.7132							
Brown-Forsythe test								
F (DFn, DFd)	1.445 (2, 15)							
P value	0.2667							
P value summary	ns							
Significantly different standard deviatio	No							
Bartlett's test								
Bartlett's statistic (corrected)	3.915							
P value	0.1412							
P value summary	ns							
Significantly different standard deviatio	No							
ANOVA table	SS	DF	MS	F (DFn, DF	P value			
Treatment (between columns)	0.4244	2	0.2122	F (2, 15) = 1	P < 0.0001			
Residual (within columns)	0.1706	15	0.01138					
Total	0.595	17						
Data summary								
Number of treatments (columns)	3							
Number of values (total)	18							
Number of families	1							
Number of comparisons per family	3							
Alpha	0.05							
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary				
shControl vs. shTERT 1	0.3758	0.2158 to 0.	Yes	****		A-B		
shControl vs. shTERT 1 + MYC	0.1739	0.01400 to (	Yes	*		A-C		
shTERT 1 vs. shTERT 1 + MYC	-0.2018	-0.3618 to -	Yes	*		B-C		
Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	n1	n2	q	DF
shControl vs. shTERT 1	1.013	0.6369	0.3758	0.06158	6	6	8.63	15
shControl vs. shTERT 1 + MYC	1.013	0.8387	0.1739	0.06158	6	6	3.995	15
shTERT 1 vs. shTERT 1 + MYC	0.6369	0.8387	-0.2018	0.06158	6	6	4.635	15
PGK1								
ANOVA summary								
F	15.89							
P value	0.0002							
P value summary	***							
Are differences among means statistica	Yes							
R square	0.6794							
Brown-Forsythe test								
F (DFn, DFd)	5.543 (2, 15)							
P value	0.0158							
P value summary	*							
Significantly different standard deviatio	Yes							
Bartlett's test								
Bartlett's statistic (corrected)	9.112							
P value	0.0105							
P value summary	*							
Significantly different standard deviatio	Yes							

ANOVA table	SS	DF	MS	F (DFn, DF(	P value			
Treatment (between columns)	0.3994	2	0.1997	F (2, 15) = 1	P = 0.0002			
Residual (within columns)	0.1885	15	0.01256					
Total	0.5878	17						
Data summary								
Number of treatments (columns)	3							
Number of values (total)	18							
Number of families	1							
Number of comparisons per family	3							
Alpha	0.05							
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary				
shControl vs. shTERT 1	0.2902	0.1221 to 0.	Yes	**		A-B		
shControl vs. shTERT 1 + MYC	-0.04635	-0.2144 to 0	No	ns		A-C		
shTERT 1 vs. shTERT 1 + MYC	-0.3366	-0.5047 to -	Yes	***		B-C		
Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	n1	n2	q	
shControl vs. shTERT 1	1.002	0.7116	0.2902	0.06471	6	6	6.343	
shControl vs. shTERT 1 + MYC	1.002	1.048	-0.04635	0.06471	6	6	1.013	
shTERT 1 vs. shTERT 1 + MYC	0.7116	1.048	-0.3366	0.06471	6	6	7.356	
ALDOC								
ANOVA summary								
F	41.82							
P value	< 0.0001							
P value summary	****							
Are differences among means statistica	Yes							
R square	0.8479							
Brown-Forsythe test								
F (DFn, DFd)	0.8620 (2, 15)							
P value	0.4422							
P value summary	ns							
Significantly different standard deviatio	No							
Bartlett's test								
Bartlett's statistic (corrected)	3.02							
P value	0.2209							
P value summary	ns							
Significantly different standard deviatio	No							
ANOVA table	SS	DF	MS	F (DFn, DF(	P value			
Treatment (between columns)	0.5738	2	0.2869	F (2, 15) = 4	P < 0.0001			
Residual (within columns)	0.1029	15	0.006861					
Total	0.6768	17						
Data summary								
Number of treatments (columns)	3							
Number of values (total)	18							
Number of families	1							
Number of comparisons per family	3							
Alpha	0.05							
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary				
shControl vs. shTERT 1	0.3963	0.2721 to 0.	Yes	****		A-B		
shControl vs. shTERT 1 + MYC	0.03803	-0.08619 to	No	ns		A-C		
shTERT 1 vs. shTERT 1 + MYC	-0.3583	-0.4825 to -	Yes	****		B-C		
Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	n1	n2		

shControl vs. shTERT 1	0.9811	0.5848	0.3963	0.04782	6	6		
shControl vs. shTERT 1 + MYC	0.9811	0.9431	0.03803	0.04782	6	6		
shTERT 1 vs. shTERT 1 + MYC	0.5848	0.9431	-0.3583	0.04782	6	6		
PKM2								
ANOVA summary								
F	11.97							
P value	0.0009							
P value summary	***							
Are differences among means statistica	Yes							
R square	0.6311							
Brown-Forsythe test								
F (DFn, DFd)	0.7607 (2, 14)							
P value	0.4857							
P value summary	ns							
Significantly different standard deviatio	No							
Bartlett's test								
Bartlett's statistic (corrected)	4.151							
P value	0.1255							
P value summary	ns							
Significantly different standard deviatio	No							
ANOVA table	SS	DF	MS	F (DFn, DF	P value			
Treatment (between columns)	0.2527	2	0.1263	F (2, 14) = 1	P = 0.0009			
Residual (within columns)	0.1477	14	0.01055					
Total	0.4004	16						
Data summary								
Number of treatments (columns)	3							
Number of values (total)	17							
Number of families	1							
Number of comparisons per family	3							
Alpha	0.05							
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary				
shControl vs. shTERT 1	0.2609	0.1056 to 0.	Yes	**		A-B		
shControl vs. shTERT 1 + MYC	0.01314	-0.1497 to 0	No	ns		A-C		
shTERT 1 vs. shTERT 1 + MYC	-0.2477	-0.4105 to -	Yes	**		B-C		
Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	n1	n2	q	
shControl vs. shTERT 1	1.09	0.8295	0.2609	0.0593	6	6	6.22	
shControl vs. shTERT 1 + MYC	1.09	1.077	0.01314	0.0622	6	5	0.2988	
shTERT 1 vs. shTERT 1 + MYC	0.8295	1.077	-0.2477	0.0622	6	5	5.632	
LDHA								
ANOVA summary								
F	10.9							
P value	0.0025							
P value summary	**							
Are differences among means statistica	Yes							
R square	0.6646							
Brown-Forsythe test								
F (DFn, DFd)	13.07 (2, 11)							
P value	0.0012							
P value summary	**							
Significantly different standard deviatio	Yes							
Bartlett's test								

Bartlett's statistic (corrected)								
P value								
P value summary								
Significantly different standard deviations? (P < 0.05)								
ANOVA table	SS	DF	MS	F (DFn, DF	P value			
Treatment (between columns)	0.2027	2	0.1013	F (2, 11) = 1	P = 0.0025			
Residual (within columns)	0.1023	11	0.009299					
Total	0.3049	13						
Data summary								
Number of treatments (columns)	3							
Number of values (total)	14							
Number of families	1							
Number of comparisons per family	3							
Alpha	0.05							
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary				
shControl vs. shTERT 1	0.2437	0.09335 to (	Yes	**		A-B		
shControl vs. shTERT 1 + MYC	0.002388	-0.2103 to 0	No	ns		A-C		
shTERT 1 vs. shTERT 1 + MYC	-0.2413	-0.4540 to -	Yes	*		B-C		
Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	n1	n2	q	DF
shControl vs. shTERT 1	1.013	0.7694	0.2437	0.05567	6	6	6.191	11
shControl vs. shTERT 1 + MYC	1.013	1.011	0.002388	0.07873	6	2	0.04289	11
shTERT 1 vs. shTERT 1 + MYC	0.7694	1.011	-0.2413	0.07873	6	2	4.335	11

Statistics for Figure S5G					
Cyclin D2					
ANOVA summary					
F	283.5				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significant? (P < 0.05)	Yes				
R square	0.9793				
Brown-Forsythe test					
F (DFn, DFd)	7.435 (5, 30)				
P value	0.0001				
P value summary	***				
Significantly different standard deviations? (P < 0.05)	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	39.74				
P value	< 0.0001				
P value summary	****				
Significantly different standard deviations? (P < 0.05)	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF(	P value
Treatment (between columns)	20.77	5	4.153	F (5, 30) = 2	P < 0.0001
Residual (within columns)	0.4395	30	0.01465		
Total	21.21	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary	
Control vs. MYC	-0.8267	-1.039 to -0	Yes	****	
Control vs. MYC MUT	0.1833	-0.02923 to	No	ns	
Control vs. TERT	-1.23	-1.443 to -1	Yes	****	
Control vs. TERT + MYC	-1.907	-2.119 to -1	Yes	****	
Control vs. TERT + MYC MUT	-0.01833	-0.2309 to (	No	ns	
MYC vs. MYC MUT	1.01	0.7974 to 1	Yes	****	
MYC vs. TERT	-0.4033	-0.6159 to -	Yes	****	
MYC vs. TERT + MYC	-1.08	-1.293 to -0	Yes	****	
MYC vs. TERT + MYC MUT	0.8083	0.5958 to 1	Yes	****	
MYC MUT vs. TERT	-1.413	-1.626 to -1	Yes	****	
MYC MUT vs. TERT + MYC	-2.09	-2.303 to -1	Yes	****	
MYC MUT vs. TERT + MYC MUT	-0.2017	-0.4142 to (	No	ns	
TERT vs. TERT + MYC	-0.6767	-0.8892 to -	Yes	****	
TERT vs. TERT + MYC MUT	1.212	0.9991 to 1.	Yes	****	
TERT + MYC vs. TERT + MYC MUT	1.888	1.676 to 2.1	Yes	****	
PKM2					
ANOVA summary					
F	78.16				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significant? (P < 0.05)	Yes				
R square	0.9287				
Brown-Forsythe test					
F (DFn, DFd)	2.449 (5, 30)				
P value	0.0564				
P value summary	ns				
Significantly different standard deviations? (P < 0.05)	No				
Bartlett's test					
Bartlett's statistic (corrected)	19.57				
P value	0.0015				

P value summary	**				
Significantly different standard deviations? (P < 0.05)	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	11.11	5	2.221	F (5, 30) = 7	P < 0.0001
Residual (within columns)	0.8526	30	0.02842		
Total	11.96	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary	
Control vs. MYC	-0.7333	-1.029 to -0	Yes	****	
Control vs. MYC MUT	0.2533	-0.04271 to	No	ns	
Control vs. TERT	-0.8817	-1.178 to -0	Yes	****	
Control vs. TERT + MYC	-1.1	-1.396 to -0	Yes	****	
Control vs. TERT + MYC MUT	0.2617	-0.03438 to	No	ns	
MYC vs. MYC MUT	0.9867	0.6906 to 1.	Yes	****	
MYC vs. TERT	-0.1483	-0.4444 to 0	No	ns	
MYC vs. TERT + MYC	-0.3667	-0.6627 to -	Yes	**	
MYC vs. TERT + MYC MUT	0.995	0.6990 to 1.	Yes	****	
MYC MUT vs. TERT	-1.135	-1.431 to -0	Yes	****	
MYC MUT vs. TERT + MYC	-1.353	-1.649 to -1	Yes	****	
MYC MUT vs. TERT + MYC MUT	0.008333	-0.2877 to 0	No	ns	
TERT vs. TERT + MYC	-0.2183	-0.5144 to 0	No	ns	
TERT vs. TERT + MYC MUT	1.143	0.8473 to 1.	Yes	****	
TERT + MYC vs. TERT + MYC MUT	1.362	1.066 to 1.6	Yes	****	
GAPDH					
ANOVA summary					
F	149.7				
P value	< 0.0001				
P value summary	****				
Are differences among means statistically significant? (P < 0.05)	Yes				
R square	0.9615				
Brown-Forsythe test					
F (DFn, DFd)	6.280 (5, 30)				
P value	0.0004				
P value summary	***				
Significantly different standard deviations? (P < 0.05)	Yes				
Bartlett's test					
Bartlett's statistic (corrected)	15.71				
P value	0.0077				
P value summary	**				
Significantly different standard deviations? (P < 0.05)	Yes				
ANOVA table	SS	DF	MS	F (DFn, DF	P value
Treatment (between columns)	8.58	5	1.716	F (5, 30) = 1	P < 0.0001
Residual (within columns)	0.344	30	0.01147		
Total	8.924	35			
Data summary					
Number of treatments (columns)	6				
Number of values (total)	36				
Number of families	1				
Number of comparisons per family	15				
Alpha	0.05				
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary	
Control vs. MYC	-0.9083	-1.096 to -0	Yes	****	

Control vs. MYC MUT	-0.215	-0.4030 to -	Yes	*	
Control vs. TERT	-1.112	-1.300 to -0	Yes	****	
Control vs. TERT + MYC	-1.345	-1.533 to -1	Yes	****	
Control vs. TERT + MYC MUT	-0.4117	-0.5997 to -	Yes	****	
MYC vs. MYC MUT	0.6933	0.5053 to 0.	Yes	****	
MYC vs. TERT	-0.2033	-0.3914 to -	Yes	*	
MYC vs. TERT + MYC	-0.4367	-0.6247 to -	Yes	****	
MYC vs. TERT + MYC MUT	0.4967	0.3086 to 0.	Yes	****	
MYC MUT vs. TERT	-0.8967	-1.085 to -0	Yes	****	
MYC MUT vs. TERT + MYC	-1.13	-1.318 to -0	Yes	****	
MYC MUT vs. TERT + MYC MUT	-0.1967	-0.3847 to -	Yes	*	
TERT vs. TERT + MYC	-0.2333	-0.4214 to -	Yes	**	
TERT vs. TERT + MYC MUT	0.7	0.5120 to 0.	Yes	****	
TERT + MYC vs. TERT + MYC MUT	0.9333	0.7453 to 1.	Yes	****	

Statistics for Figure S6C						
Cyclin D1						
ANOVA summary						
F	70.47					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P	Yes					
R square	0.9514					
Brown-Forsythe test						
F (DFn, DFd)	1.811 (5, 18)					
P value	0.1614					
P value summary	ns					
Significantly different standard deviations? (P < 0.05)	No					
Bartlett's test						
Bartlett's statistic (corrected)	11.09					
P value	0.0495					
P value summary	*					
Significantly different standard deviations? (P < 0.05)	Yes					
ANOVA table	SS	DF	MS	F (DFn, DF	P value	
Treatment (between columns)	9.22	5	1.844	F (5, 18) = 7	P < 0.0001	
Residual (within columns)	0.471	18	0.02617			
Total	9.691					
Data summary						
Number of treatments (columns)	6					
Number of values (total)	24					
Number of families	1					
Number of comparisons per family	15					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary		
shControl + Vector vs. shControl + MYC	-0.3138	-0.6773 to 0	No	ns		
shControl + Vector vs. shControl + MYC T58A	-0.7128	-1.076 to -0	Yes	****		
shControl + Vector vs. shTERT + Vector	0.4102	0.04670 to (	Yes	*		
shControl + Vector vs. shTERT + MYC	-0.2051	-0.5686 to 0	No	ns		
shControl + Vector vs. shTERT + MYC T58A	-1.56	-1.923 to -1	Yes	****		
shControl + MYC vs. shControl + MYC T58A	-0.399	-0.7625 to -	Yes	*		
shControl + MYC vs. shTERT + Vector	0.724	0.3605 to 1.	Yes	****		
shControl + MYC vs. shTERT + MYC	0.1087	-0.2548 to 0	No	ns		
shControl + MYC vs. shTERT + MYC T58A	-1.246	-1.610 to -0	Yes	****		
shControl + MYC T58A vs. shTERT + Vector	1.123	0.7595 to 1.	Yes	****		
shControl + MYC T58A vs. shTERT + MYC	0.5077	0.1442 to 0.	Yes	**		
shControl + MYC T58A vs. shTERT + MYC T58A	-0.8471	-1.211 to -0	Yes	****		
shTERT + Vector vs. shTERT + MYC	-0.6153	-0.9788 to -	Yes	***		
shTERT + Vector vs. shTERT + MYC T58A	-1.97	-2.334 to -1	Yes	****		
shTERT + MYC vs. shTERT + MYC T58A	-1.355	-1.718 to -0	Yes	****		
eif2A						
ANOVA summary						
F	40.05					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P	Yes					
R square	0.9175					
Brown-Forsythe test						
F (DFn, DFd)	2.825 (5, 18)					
P value	0.047					
P value summary	*					
Significantly different standard deviations? (P < 0.05)	Yes					
Bartlett's test						
Bartlett's statistic (corrected)	15.12					
P value	0.0099					
P value summary	**					
Significantly different standard deviations? (P < 0.05)	Yes					

ANOVA table	SS	DF	MS	F (DFn, DF	P value	
Treatment (between columns)	8.387	5	1.677	F (5, 18) = 4	P < 0.0001	
Residual (within columns)	0.7539	18	0.04188			
Total	9.141	23				
Data summary						
Number of treatments (columns)	6					
Number of values (total)	24					
Number of families	1					
Number of comparisons per family	15					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary		
shControl + Vector vs. shControl + MYC	-0.1819	-0.6418 to 0	No	ns		
shControl + Vector vs. shControl + MYC T58A	-1.119	-1.579 to -0	Yes	****		
shControl + Vector vs. shTERT + Vector	0.4438	-0.01605 to	No	ns		
shControl + Vector vs. shTERT + MYC	0.1069	-0.3530 to 0	No	ns		
shControl + Vector vs. shTERT + MYC T58A	-1.077	-1.537 to -0	Yes	****		
shControl + MYC vs. shControl + MYC T58A	-0.9372	-1.397 to -0	Yes	****		
shControl + MYC vs. shTERT + Vector	0.6258	0.1659 to 1.	Yes	**		
shControl + MYC vs. shTERT + MYC	0.2888	-0.1711 to 0	No	ns		
shControl + MYC vs. shTERT + MYC T58A	-0.8947	-1.355 to -0	Yes	****		
shControl + MYC T58A vs. shTERT + Vector	1.563	1.103 to 2.0	Yes	****		
shControl + MYC T58A vs. shTERT + MYC	1.226	0.7661 to 1.	Yes	****		
shControl + MYC T58A vs. shTERT + MYC T58A	0.0425	-0.4174 to 0	No	ns		
shTERT + Vector vs. shTERT + MYC	-0.337	-0.7969 to 0	No	ns		
shTERT + Vector vs. shTERT + MYC T58A	-1.52	-1.980 to -1	Yes	****		
shTERT + MYC vs. shTERT + MYC T58A	-1.184	-1.643 to -0	Yes	****		
NCL						
ANOVA summary						
F	35.89					
P value	< 0.0001					
P value summary	****					
Are differences among means statistically significant? (P	Yes					
R square	0.9088					
Brown-Forsythe test						
F (DFn, DFd)	3.726 (5, 18)					
P value	0.0172					
P value summary	*					
Significantly different standard deviations? (P < 0.05)	Yes					
Bartlett's test						
Bartlett's statistic (corrected)	19.97					
P value	0.0013					
P value summary	**					
Significantly different standard deviations? (P < 0.05)	Yes					
ANOVA table	SS	DF	MS	F (DFn, DF	P value	
Treatment (between columns)	10.75	5	2.15	F (5, 18) = 3	P < 0.0001	
Residual (within columns)	1.078	18	0.05989			
Total	11.83	23				
Data summary						
Number of treatments (columns)	6					
Number of values (total)	24					
Number of families	1					
Number of comparisons per family	15					
Alpha	0.05					
Tukey's multiple comparisons test	Mean Diff.	95% CI of d	Significant?	Summary		
shControl + Vector vs. shControl + MYC	-0.4684	-1.018 to 0.	No	ns		
shControl + Vector vs. shControl + MYC T58A	-1.246	-1.795 to -0	Yes	****		
shControl + Vector vs. shTERT + Vector	0.4899	-0.06000 to	No	ns		
shControl + Vector vs. shTERT + MYC	-0.06165	-0.6116 to 0	No	ns		
shControl + Vector vs. shTERT + MYC T58A	-1.354	-1.904 to -0	Yes	****		
shControl + MYC vs. shControl + MYC T58A	-0.7771	-1.327 to -0	Yes	**		

shControl + MYC vs. shTERT + Vector	0.9583	0.4084 to 1.	Yes	***		
shControl + MYC vs. shTERT + MYC	0.4067	-0.1432 to 0	No	ns		
shControl + MYC vs. shTERT + MYC T58A	-0.8859	-1.436 to -0	Yes	***		
shControl + MYC T58A vs. shTERT + Vector	1.735	1.186 to 2.2	Yes	****		
shControl + MYC T58A vs. shTERT + MYC	1.184	0.6339 to 1.	Yes	****		
shControl + MYC T58A vs. shTERT + MYC T58A	-0.1087	-0.6587 to 0	No	ns		
shTERT + Vector vs. shTERT + MYC	-0.5516	-1.102 to -0	Yes	*		
shTERT + Vector vs. shTERT + MYC T58A	-1.844	-2.394 to -1	Yes	****		
shTERT + MYC vs. shTERT + MYC T58A	-1.293	-1.843 to -0	Yes	****		

Figure S1

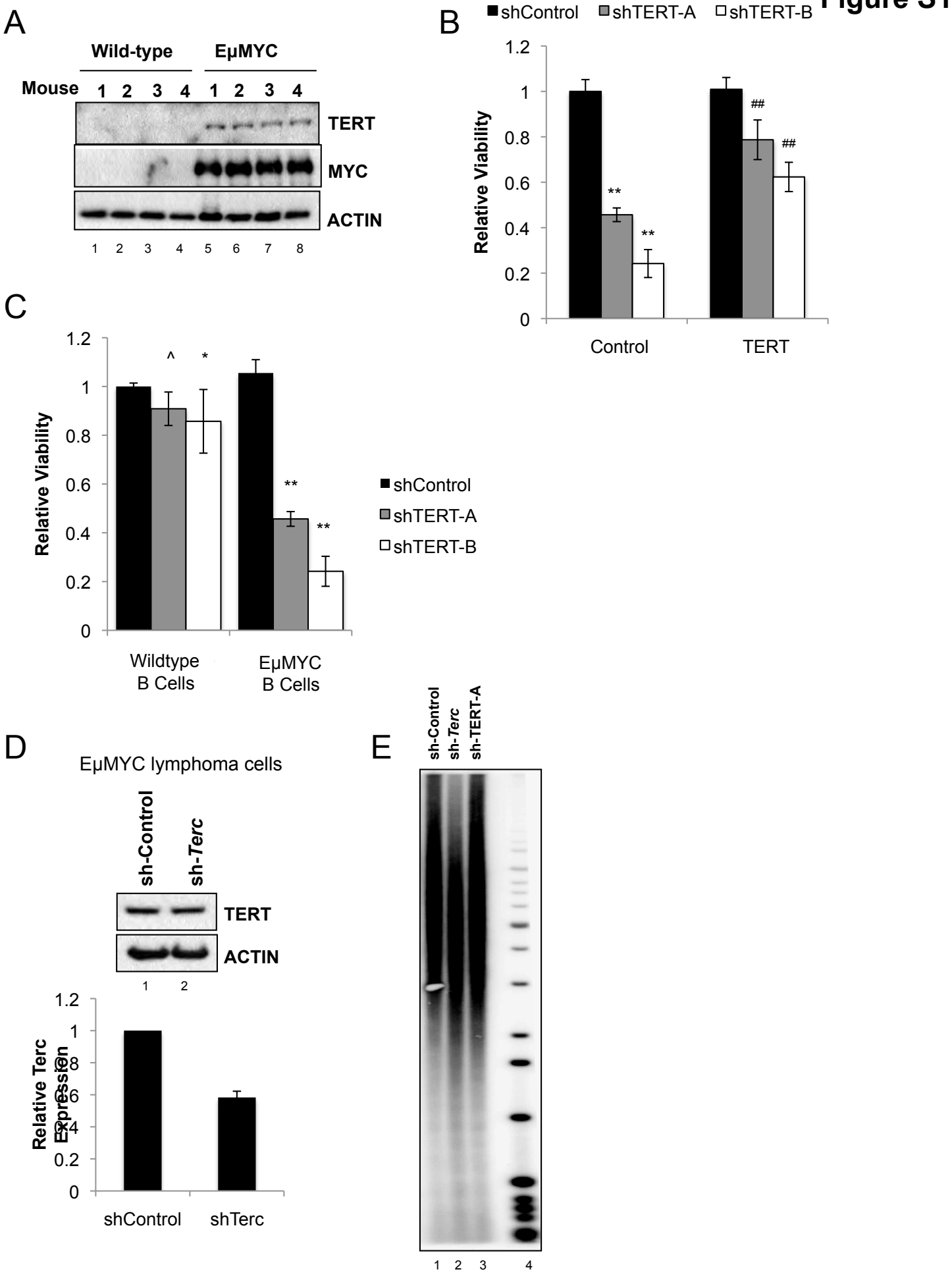
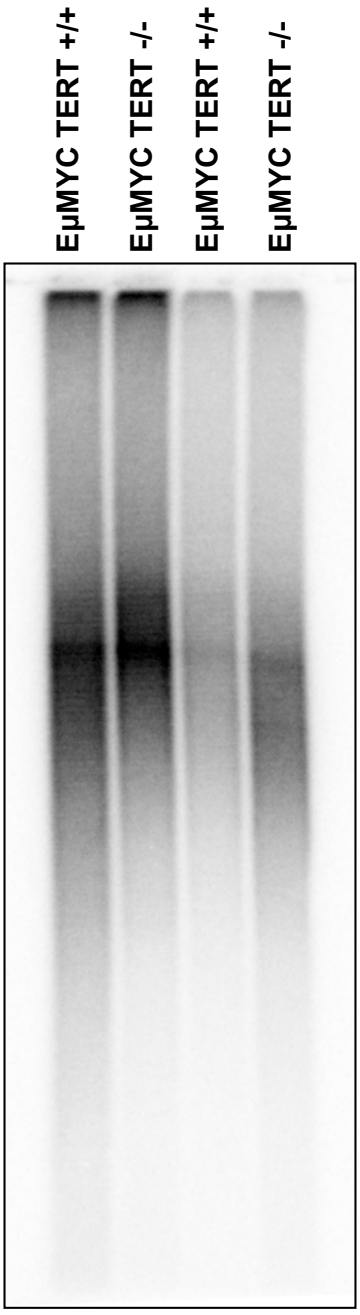

A
Wild-type
EμMYC
Mouse 1 2 3 4 1 2 3 4
TERT
MYC
ACTIN
1 2 3 4 5 6 7 8
B
shControl
shTERT-A
shTERT-B
Relative Viability
1.2
1
0.8
0.6
0.4
0.2
0
**
**
##
##
Control
TERT
C
Relative Viability
1.2
1
0.8
0.6
0.4
0.2
0
^
*
**
**
shControl
shTERT-A
shTERT-B
Wildtype B Cells
EμMYC B Cells
D
EμMYC lymphoma cells
sh-Control
sh-Terc
TERT
ACTIN
1 2
Relative Terc Expression
1.2
1
0.8
0.6
0.4
0.2
0
shControl
shTerc
E
sh-Control
sh-Terc
sh-TERT-A
1 2 3 4

Figure S2

A


EμMYC TERT +/+
EμMYC TERT -/-
EμMYC TERT +/+
EμMYC TERT -/-

B

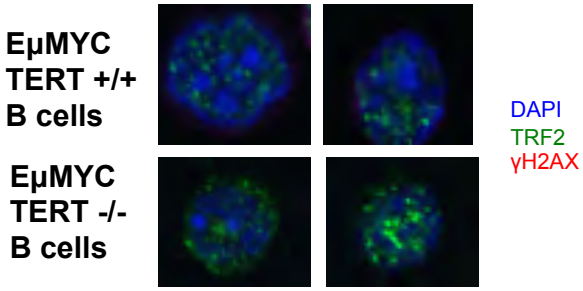
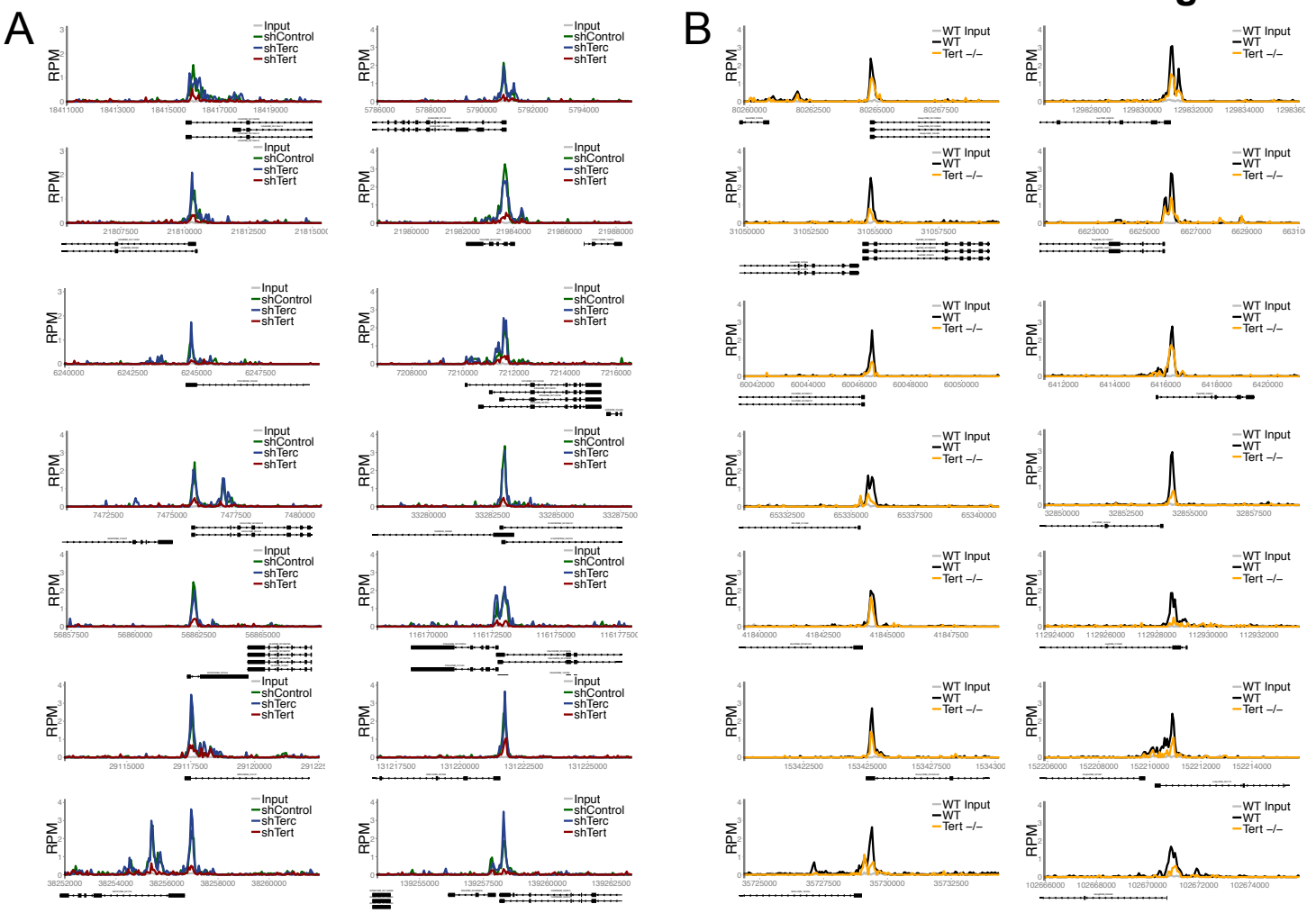
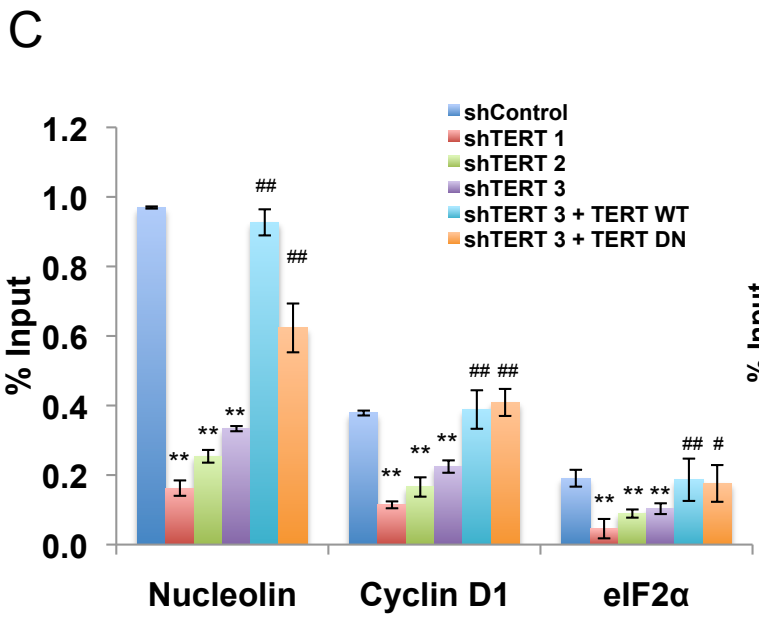

EμMYC
TERT +/+
B cells
EμMYC
TERT -/-
B cells
DAPI
TRF2
γH2AX

Figure S3


A
Input
shControl
shTerc
shTert
RPM
B
WT Input
WT
Tert −/−
RPM


C
% Input
shControl
shTERT 1
shTERT 2
shTERT 3
shTERT 3 + TERT WT
shTERT 3 + TERT DN
Nucleolin
Cyclin D1
eIF2α

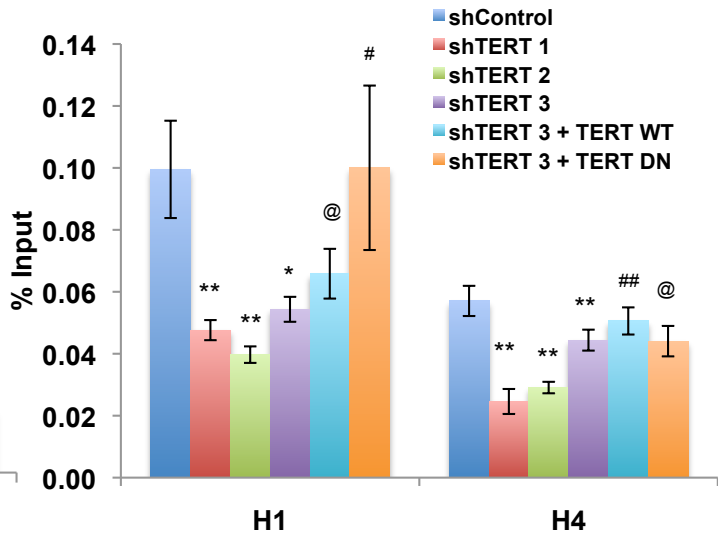

D
% Input
shControl
shTERT 1
shTERT 2
shTERT 3
shTERT 3 + TERT WT
shTERT 3 + TERT DN
H1
H4

Figure S3

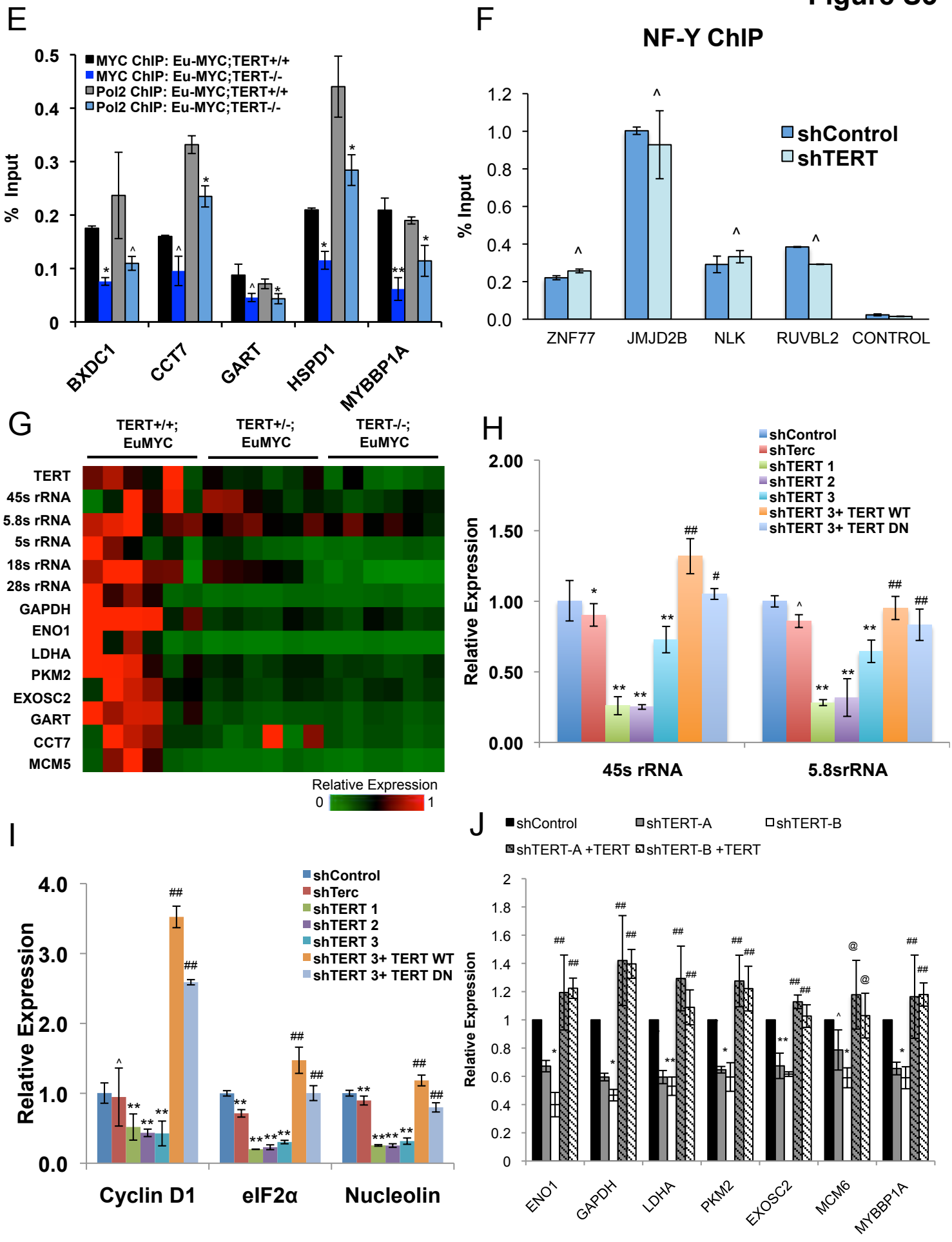
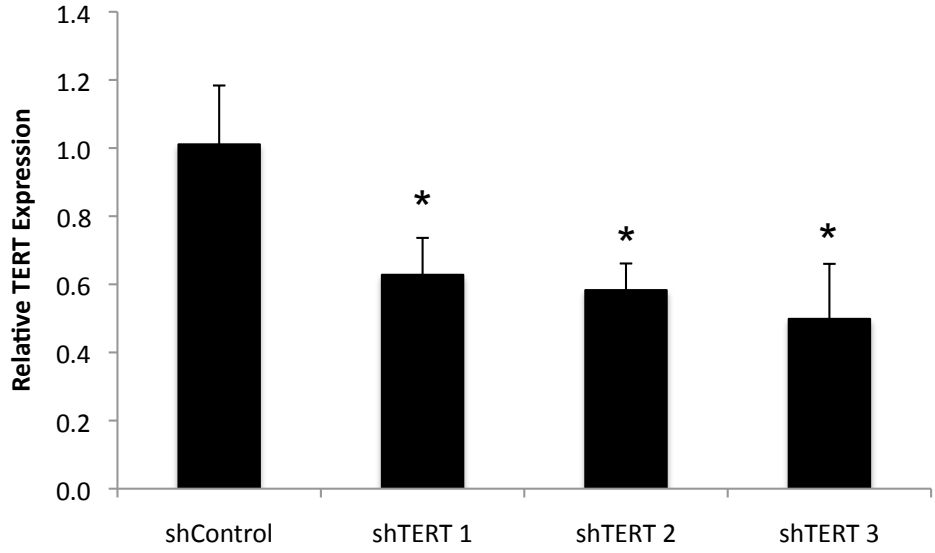

E
MYC ChIP: Eu-MYC;TERT+/+
MYC ChIP: Eu-MYC;TERT-/-
Pol2 ChIP: Eu-MYC;TERT+/+
Pol2 ChIP: Eu-MYC;TERT-/-
% Input
BXDC1
CCT7
GART
HSPD1
MYBBP1A
F
NF-Y ChIP
% Input
shControl
shTERT
ZNF77
JMJD2B
NLK
RUVBL2
CONTROL
G
TERT+/+; EuMYC
TERT+/-; EuMYC
TERT-/-; EuMYC
TERT
45s rRNA
5.8s rRNA
5s rRNA
18s rRNA
28s rRNA
GAPDH
ENO1
LDHA
PKM2
EXOSC2
GART
CCT7
MCM5
Relative Expression
0
1
H
shControl
shTerc
shTERT 1
shTERT 2
shTERT 3
shTERT 3+ TERT WT
shTERT 3+ TERT DN
Relative Expression
45s rRNA
5.8srRNA
I
shControl
shTerc
shTERT 1
shTERT 2
shTERT 3
shTERT 3+ TERT WT
shTERT 3+ TERT DN
Relative Expression
Cyclin D1
eIF2α
Nucleolin
J
shControl
shTERT-A
shTERT-B
shTERT-A +TERT
shTERT-B +TERT
Relative Expression
ENO1
GAPDH
LDHA
PKM2
EXOSC2
MCM6
MYBBP1A

Figure S4

A


High MYC
Relative TERT Expression
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
*
*
*
shControl
shTERT 1
shTERT 2
shTERT 3

B

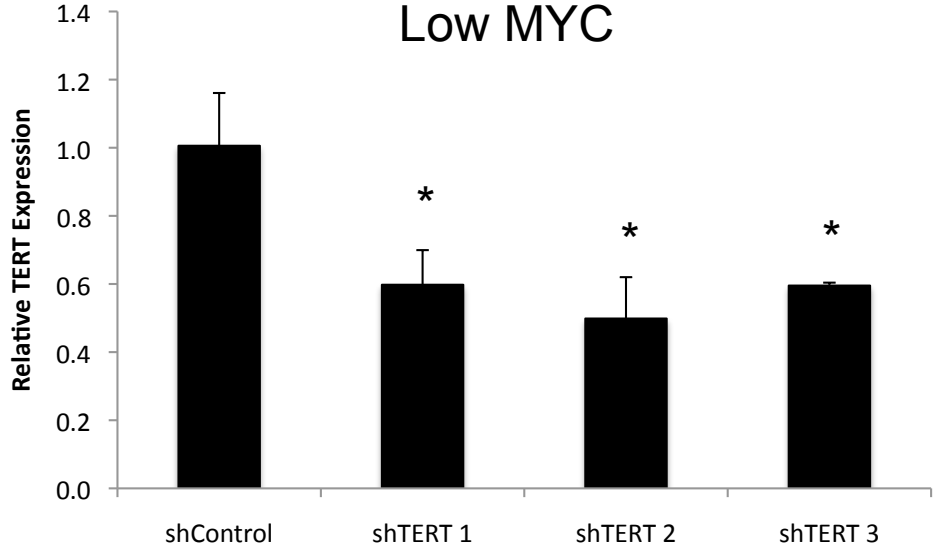

Low MYC
Relative TERT Expression
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
*
*
*
shControl
shTERT 1
shTERT 2
shTERT 3

Figure S5

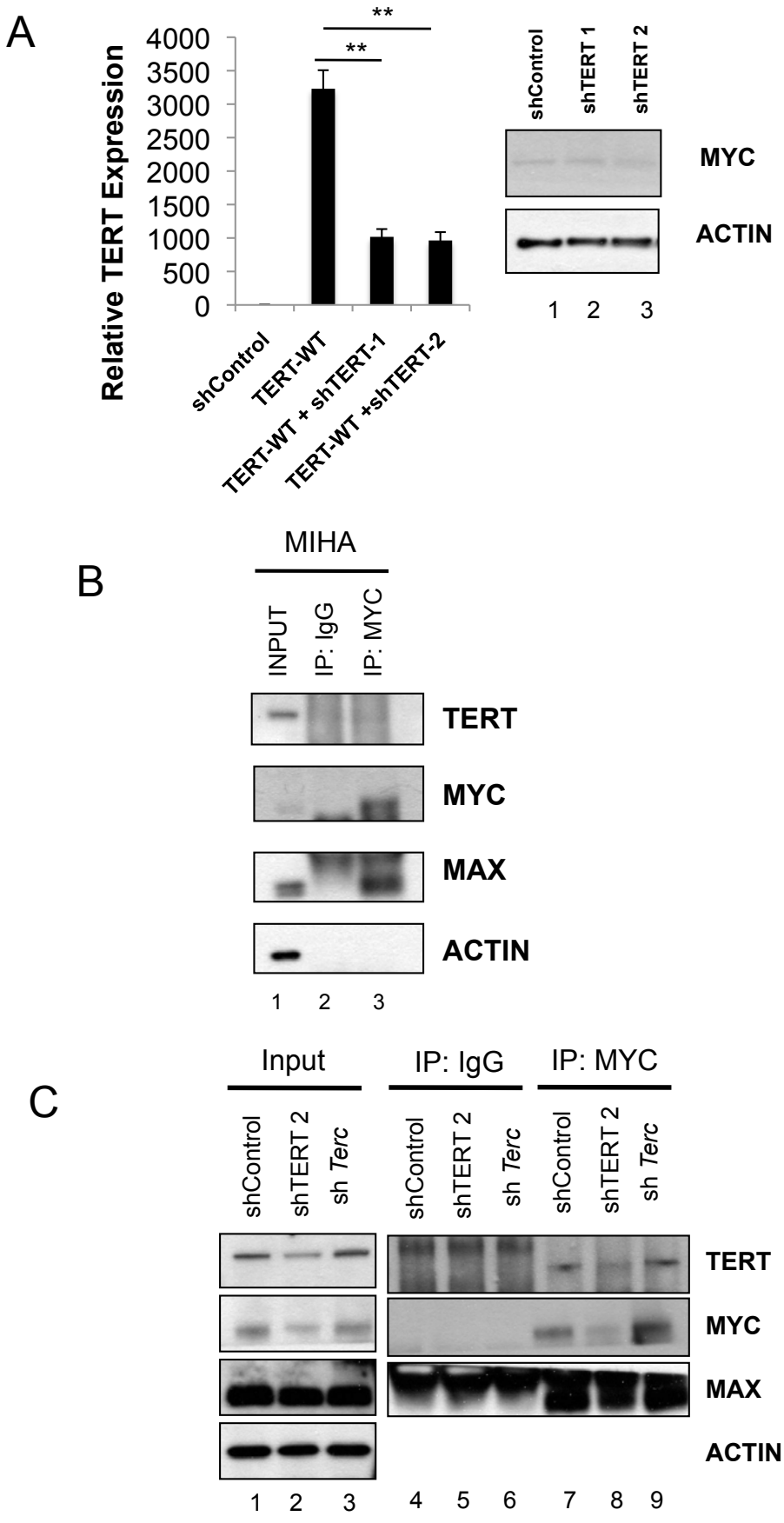
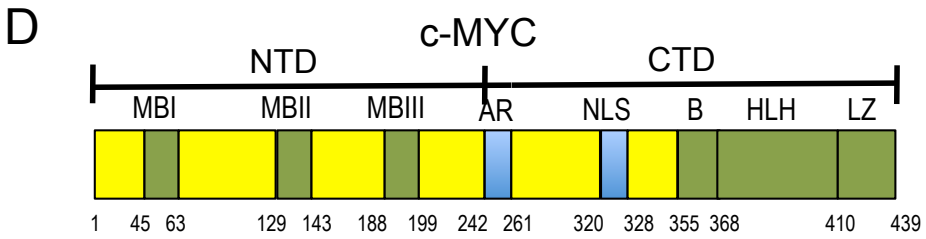
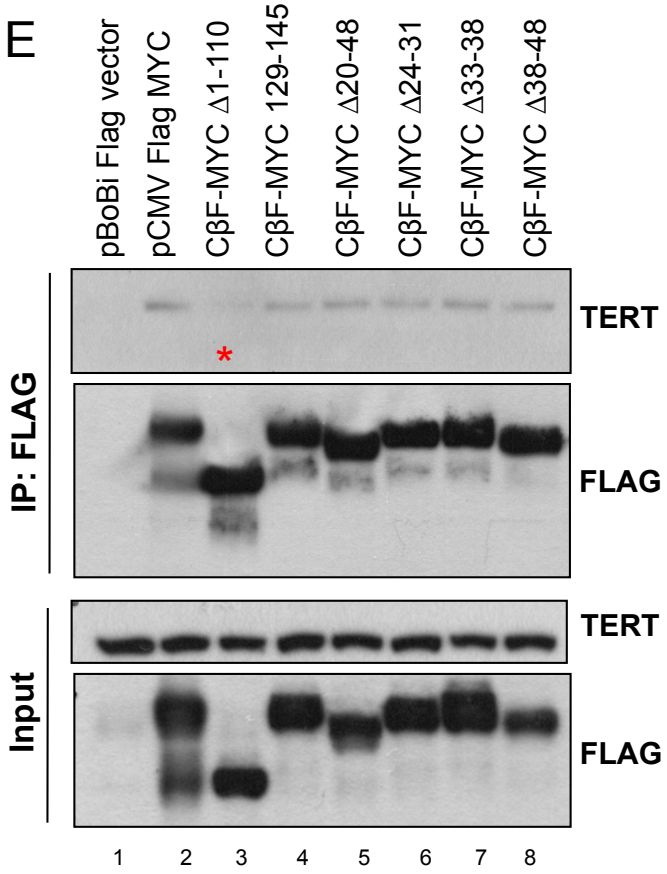
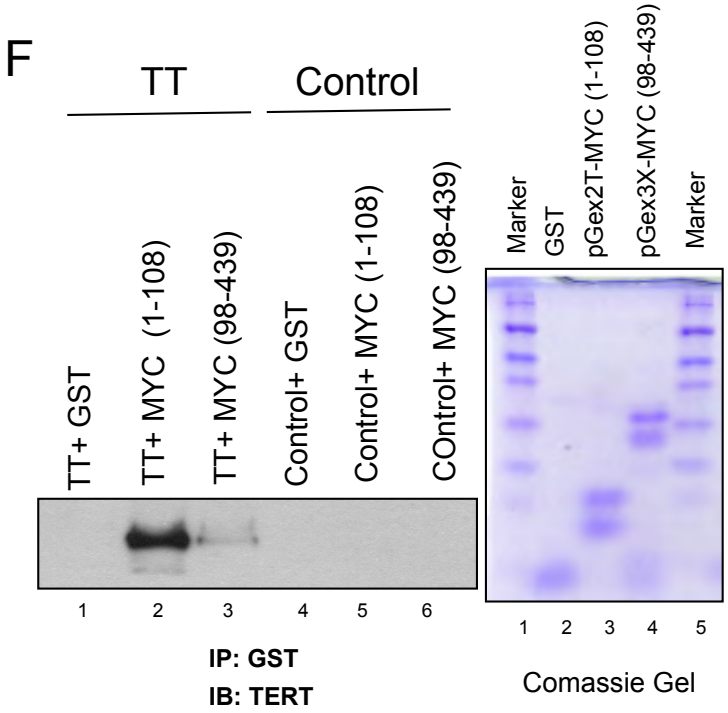
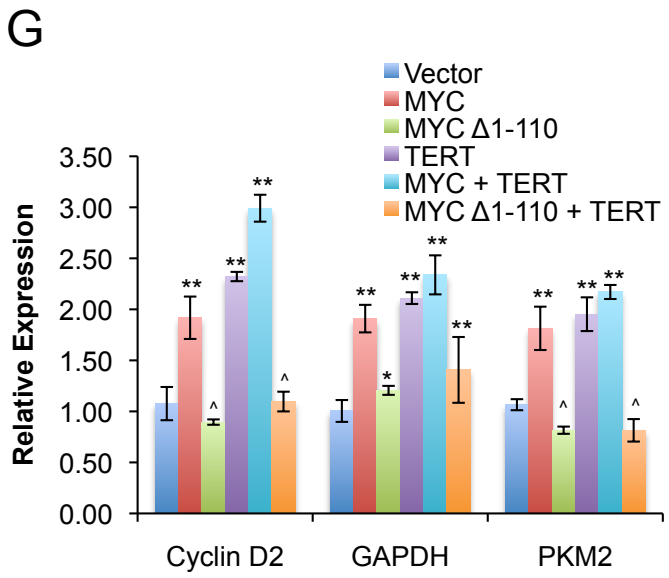

A
Relative TERT Expression
4000
3500
3000
2500
2000
1500
1000
500
0
**
**
shControl
TERT-WT
TERT-WT + shTERT-1
TERT-WT +shTERT-2
shControl
shTERT 1
shTERT 2
MYC
ACTIN
1 2 3
B
MIHA
INPUT
IP: IgG
IP: MYC
TERT
MYC
MAX
ACTIN
1 2 3
C
Input
IP: IgG
IP: MYC
shControl
shTERT 2
sh Terc
TERT
MYC
MAX
ACTIN
1 2 3 4 5 6 7 8 9

Figure S5


D
c-MYC
NTD
CTD
MBI
MBII
MBIII
AR
NLS
B
HLH
LZ
1
45
63
129
143
188
199
242
261
320
328
355
368
410
439


E
pBoBi Flag vector
pCMV Flag MYC
CβF-MYC Δ1-110
CβF-MYC 129-145
CβF-MYC Δ20-48
CβF-MYC Δ24-31
CβF-MYC Δ33-38
CβF-MYC Δ38-48
IP: FLAG
TERT
FLAG
Input
TERT
FLAG
1
2
3
4
5
6
7
8


F
TT
Control
TT+ GST
TT+ MYC (1-108)
TT+ MYC (98-439)
Control+ GST
Control+ MYC (1-108)
COntrol+ MYC (98-439)
1
2
3
4
5
6
IP: GST
IB: TERT
Marker
GST
pGex2T-MYC (1-108)
pGex3X-MYC (98-439)
Marker
1
2
3
4
5
Comassie Gel


G
Vector
MYC
MYC Δ1-110
TERT
MYC + TERT
MYC Δ1-110 + TERT
Relative Expression
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Cyclin D2
GAPDH
PKM2

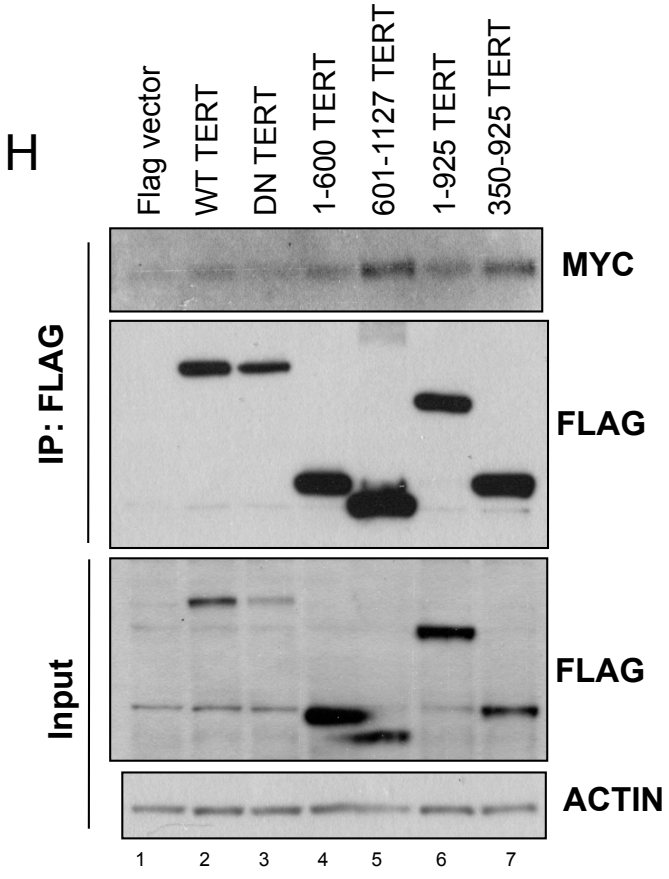

H
Flag vector
WT TERT
DN TERT
1-600 TERT
601-1127 TERT
1-925 TERT
350-925 TERT
IP: FLAG
MYC
FLAG
Input
FLAG
ACTIN
1
2
3
4
5
6
7

Figure S6

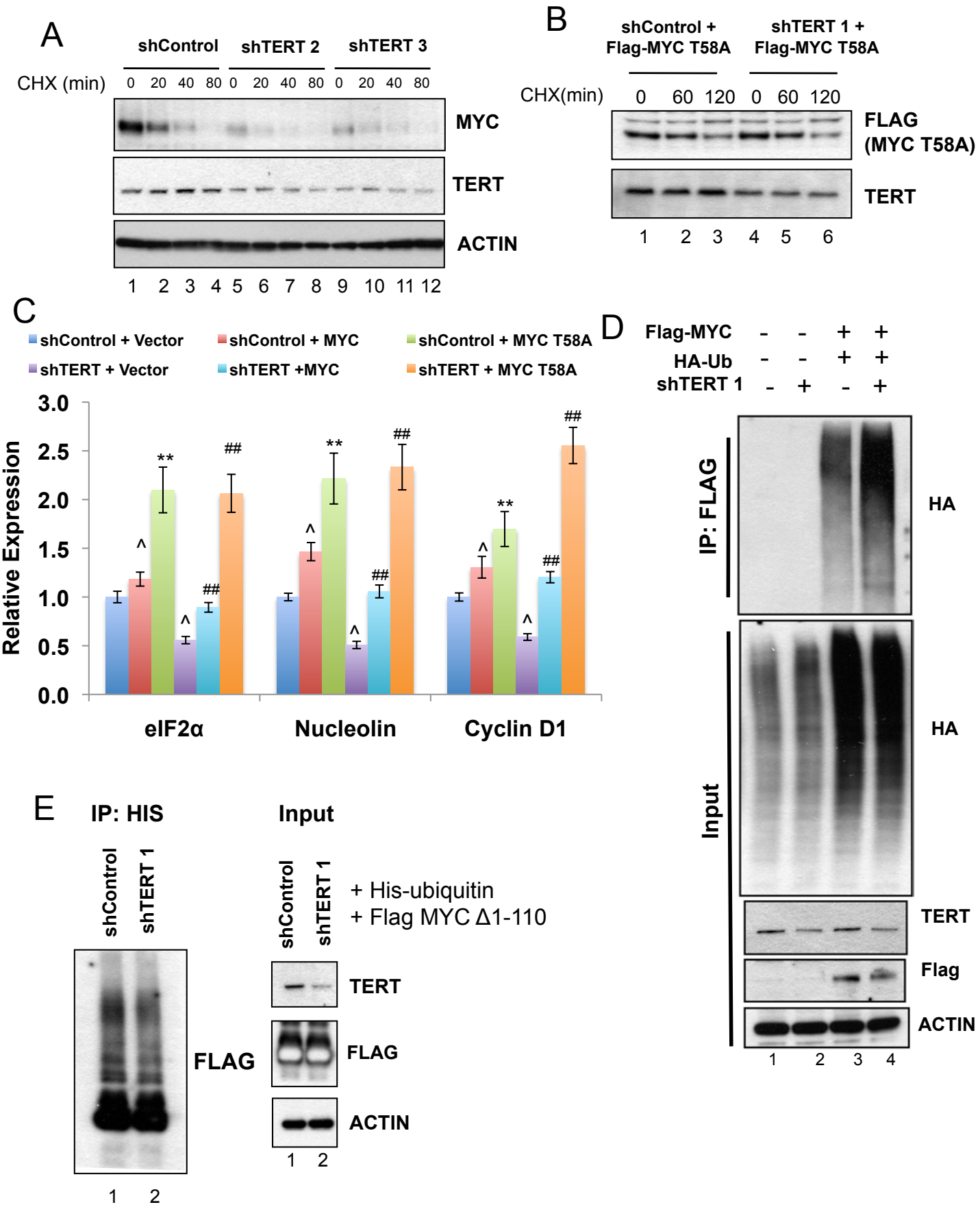
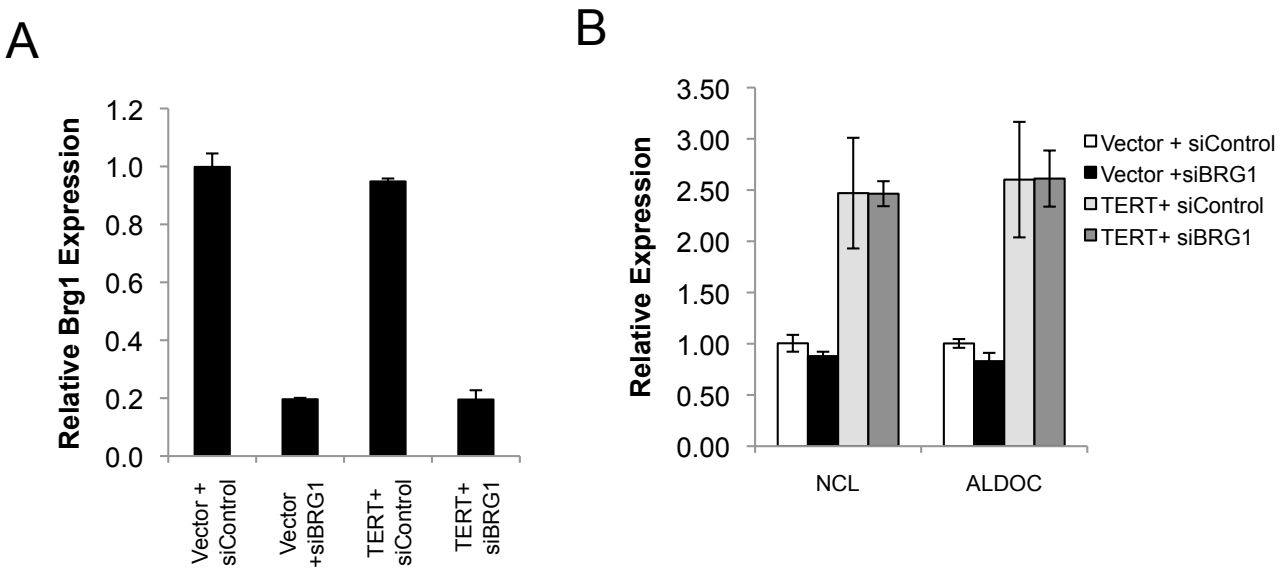

A
shControl
shTERT 2
shTERT 3
CHX (min)
0 20 40 80 0 20 40 80 0 20 40 80
MYC
TERT
ACTIN
1 2 3 4 5 6 7 8 9 10 11 12
B
shControl + Flag-MYC T58A
shTERT 1 + Flag-MYC T58A
CHX(min)
0 60 120 0 60 120
FLAG (MYC T58A)
TERT
1 2 3 4 5 6
C
shControl + Vector
shControl + MYC
shControl + MYC T58A
shTERT + Vector
shTERT +MYC
shTERT + MYC T58A
Relative Expression
3.0
2.5
2.0
1.5
1.0
0.5
0.0
eIF2α
Nucleolin
Cyclin D1
D
Flag-MYC - - + +
HA-Ub - - + +
shTERT 1 - + - +
IP: FLAG
HA
Input
HA
TERT
Flag
ACTIN
1 2 3 4
E
IP: HIS
Input
shControl
shTERT 1
+ His-ubiquitin
+ Flag MYC Δ1-110
FLAG
TERT
FLAG
ACTIN
1 2
1 2

Figure S7


A
Relative Brg1 Expression
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Vector + siControl
Vector +siBRG1
TERT+ siControl
TERT+ siBRG1
B
Relative Expression
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
NCL
ALDOC
Vector + siControl
Vector +siBRG1
TERT+ siControl
TERT+ siBRG1