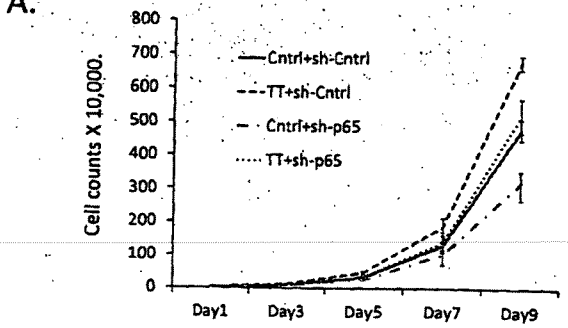
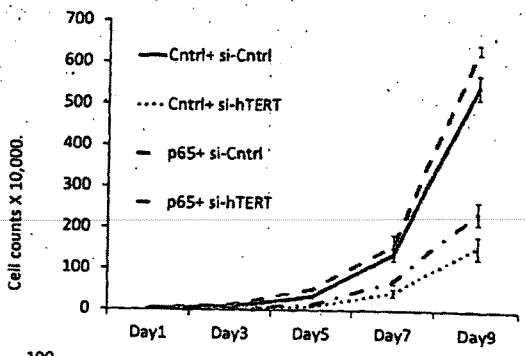
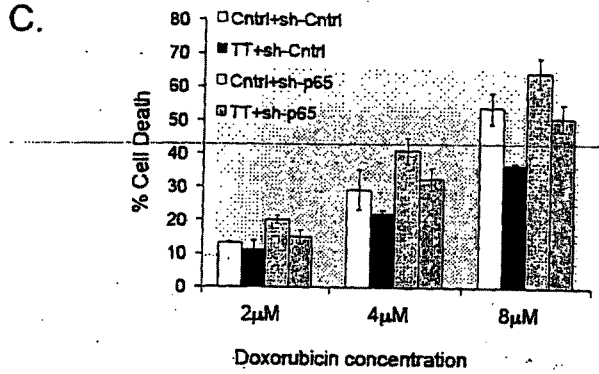
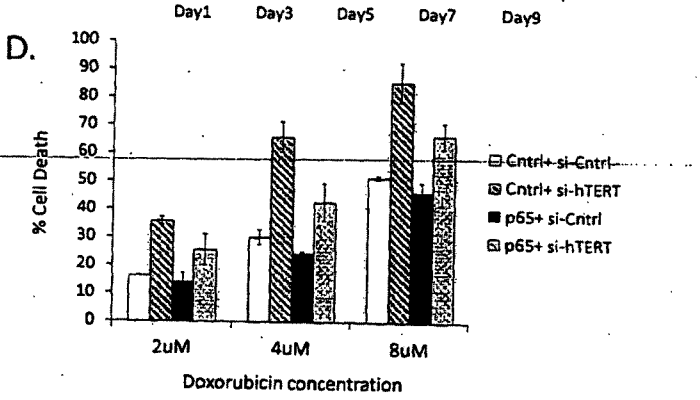
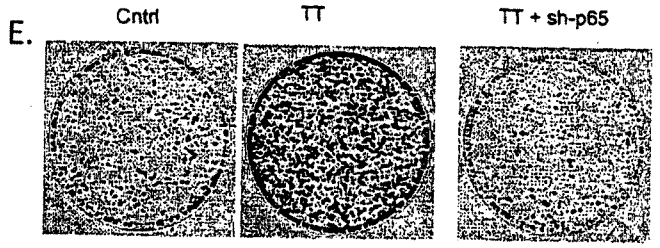
Figure 1

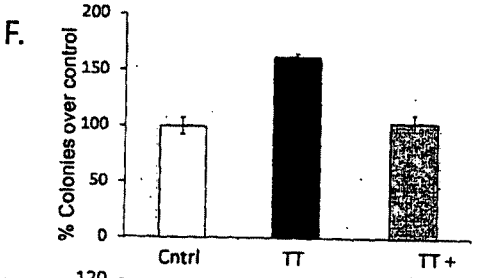

A.
Cell counts X 10,000.
Cntrl+sh-Cntrl
TT+sh-Cntrl
Cntrl+sh-p65
TT+sh-p65
Day1
Day3
Day5
Day7
Day9

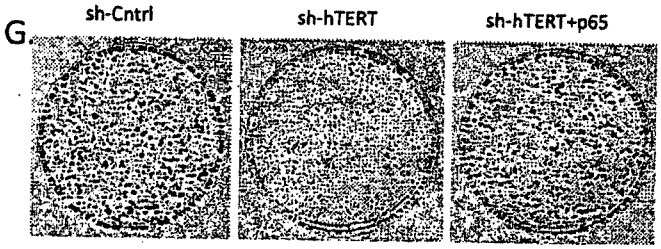

B.
Cell counts X 10,000.
Cntrl+ si-Cntrl
Cntrl+ si-hTERT
p65+ si-Cntrl
p65+ si-hTERT
Day1
Day3
Day5
Day7
Day9

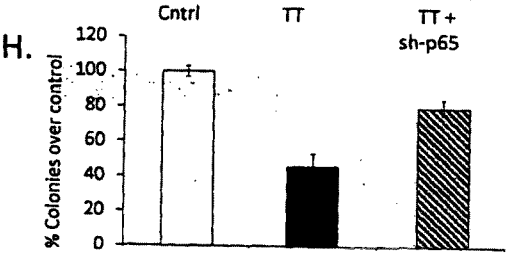

C.
% Cell Death
Cntrl+sh-Cntrl
TT+sh-Cntrl
Cntrl+sh-p65
TT+sh-p65
2μM
4μM
8μM
Doxorubicin concentration

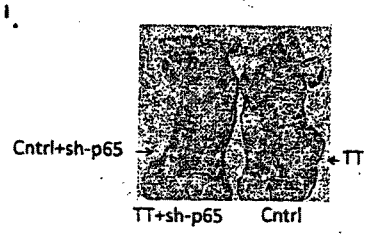

D.
% Cell Death
Cntrl+ si-Cntrl
Cntrl+ si-hTERT
p65+ si-Cntrl
p65+ si-hTERT
2uM
4uM
8uM
Doxorubicin concentration

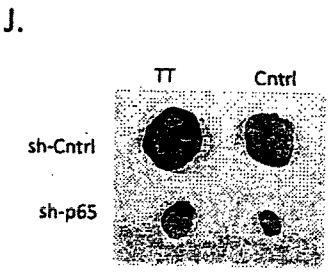

E.
Cntrl
TT
TT + sh-p65

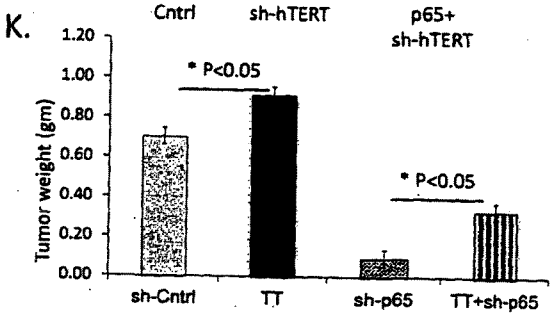

F.
% Colonies over control
Cntrl
TT
TT + sh-p65

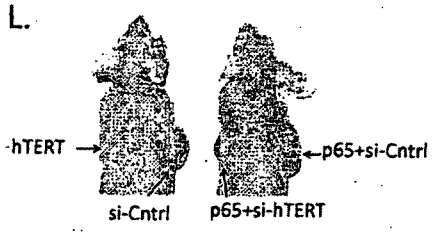

G.
sh-Cntrl
sh-hTERT
sh-hTERT+p65

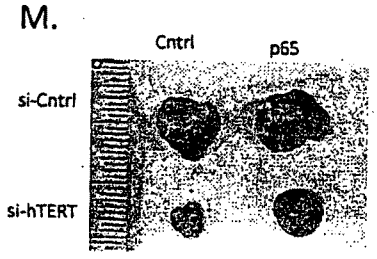

H.
% Colonies over control
Cntrl
sh-hTERT
p65+ sh-hTERT


I.
Cntrl+sh-p65
TT
TT+sh-p65
Cntrl


J.
TT
Cntrl
sh-Cntrl
sh-p65


K.
Tumor weight (gm)
* P<0.05
* P<0.05
sh-Cntrl
TT
sh-p65
TT+sh-p65


L.
hTERT
p65+si-Cntrl
si-Cntrl
p65+si-hTERT


M.
Cntrl
p65
si-Cntrl
si-hTERT

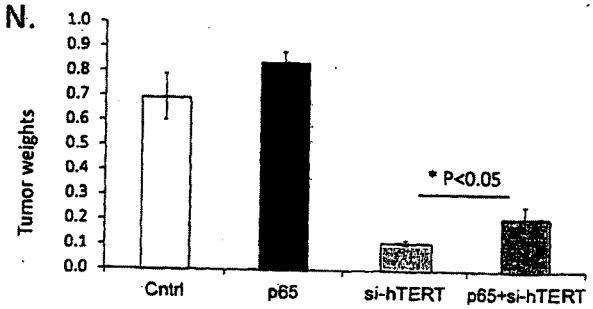

N.
Tumor weights
* P<0.05
Cntrl
p65
si-hTERT
p65+si-hTERT

Figure 2

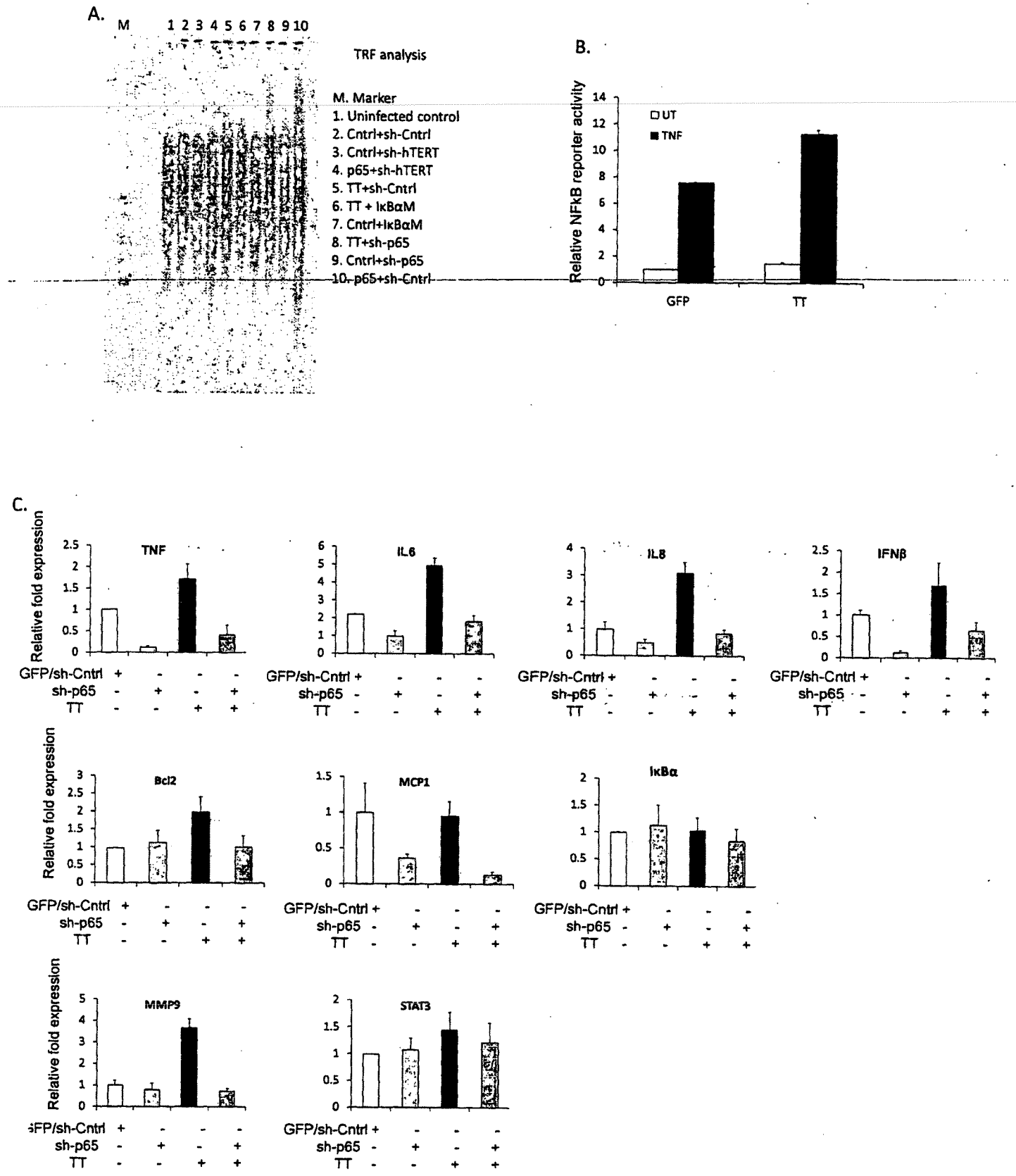
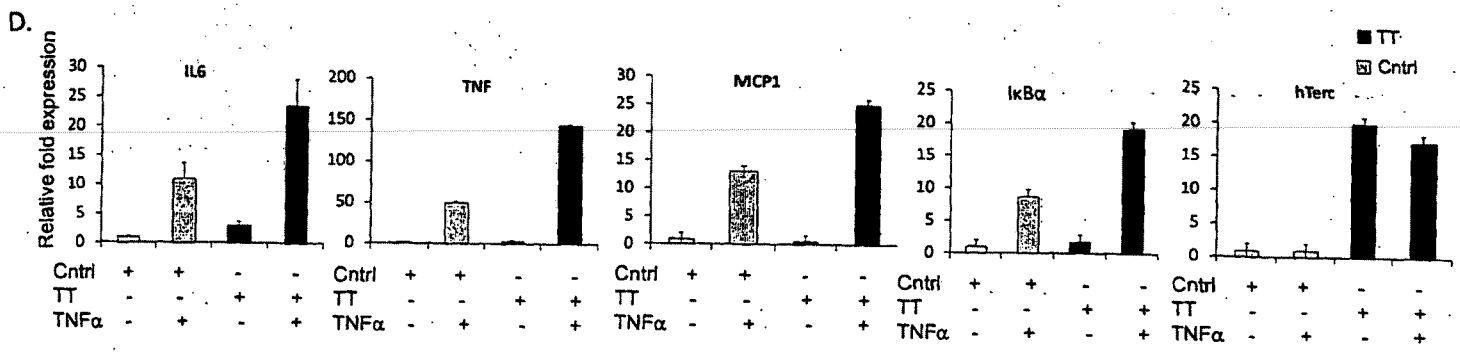
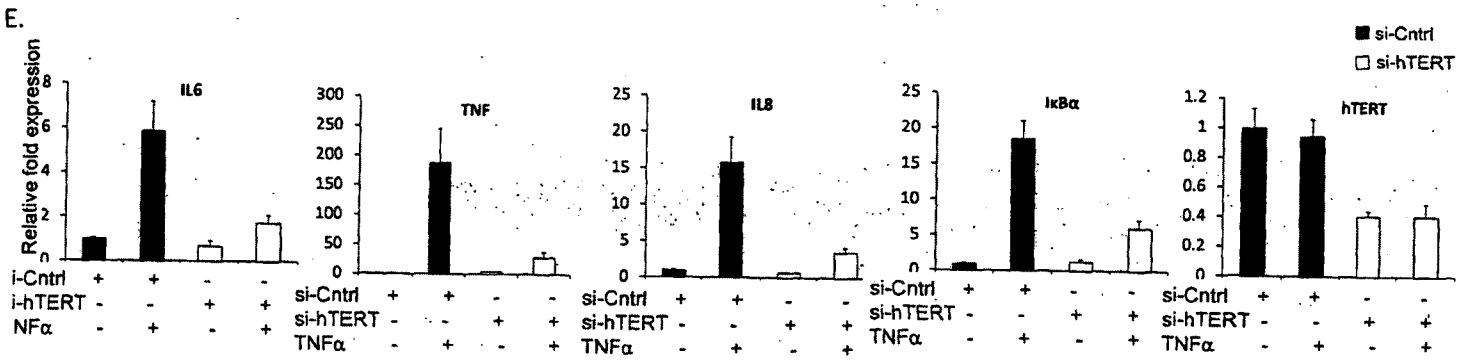
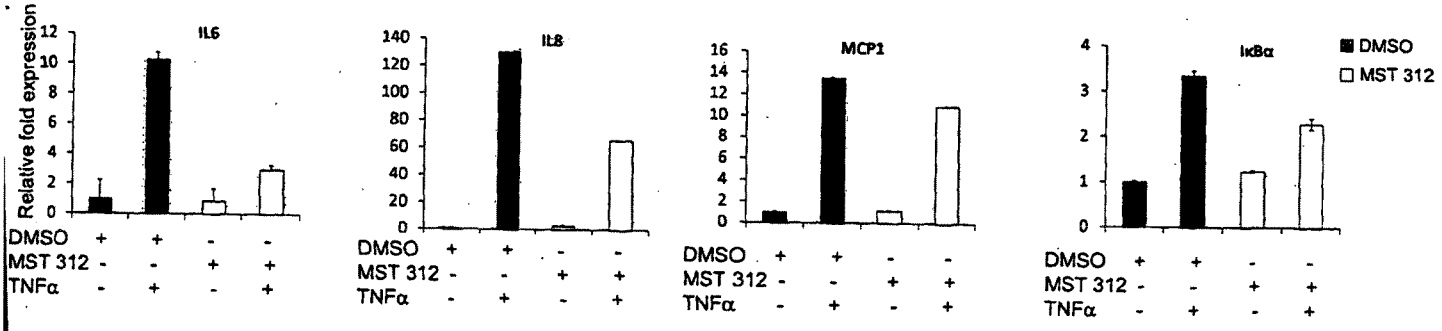

A.
M
1 2 3 4 5 6 7 8 9 10
TRF analysis
M. Marker
1. Uninfected control
2. Cntrl+sh-Cntrl
3. Cntrl+sh-hTERT
4. p65+sh-hTERT
5. TT+sh-Cntrl
6. TT + IκBαM
7. Cntrl+IκBαM
8. TT+sh-p65
9. Cntrl+sh-p65
10. p65+sh-Cntrl
B.
Relative NFkB reporter activity
UT
TNF
GFP
TT
C.
Relative fold expression
TNF
IL6
IL8
IFNβ
Bcl2
MCP1
IκBα
MMP9
STAT3
GFP/sh-Cntrl
sh-p65
TT

Figure 2


D.
Relative fold expression
IL6
TNF
MCP1
IκBα
hTerc
TT
Cntrl
Cntrl
TT
TNFα


E.
Relative fold expression
IL6
TNF
IL8
IκBα
hTERT
si-Cntrl
si-hTERT
i-Cntrl
i-hTERT
NFα
si-Cntrl
si-hTERT
TNFα


Relative fold expression
IL6
IL8
MCP1
IκBα
DMSO
MST 312
DMSO
MST 312
TNFα

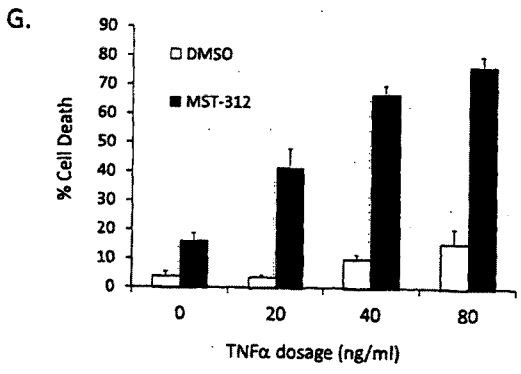

G.
% Cell Death
DMSO
MST-312
0
20
40
80
TNFα dosage (ng/ml)

Figure 3

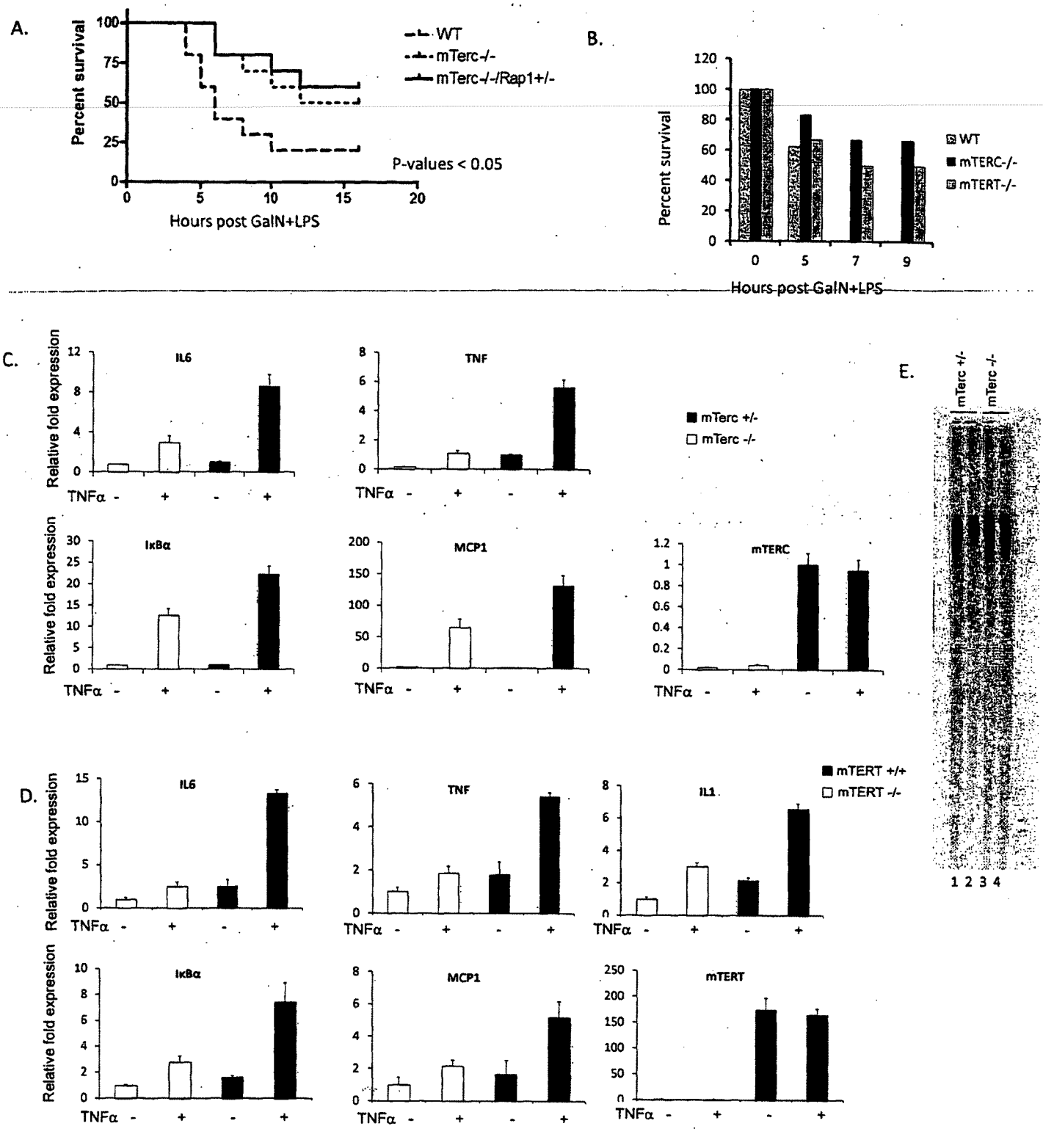
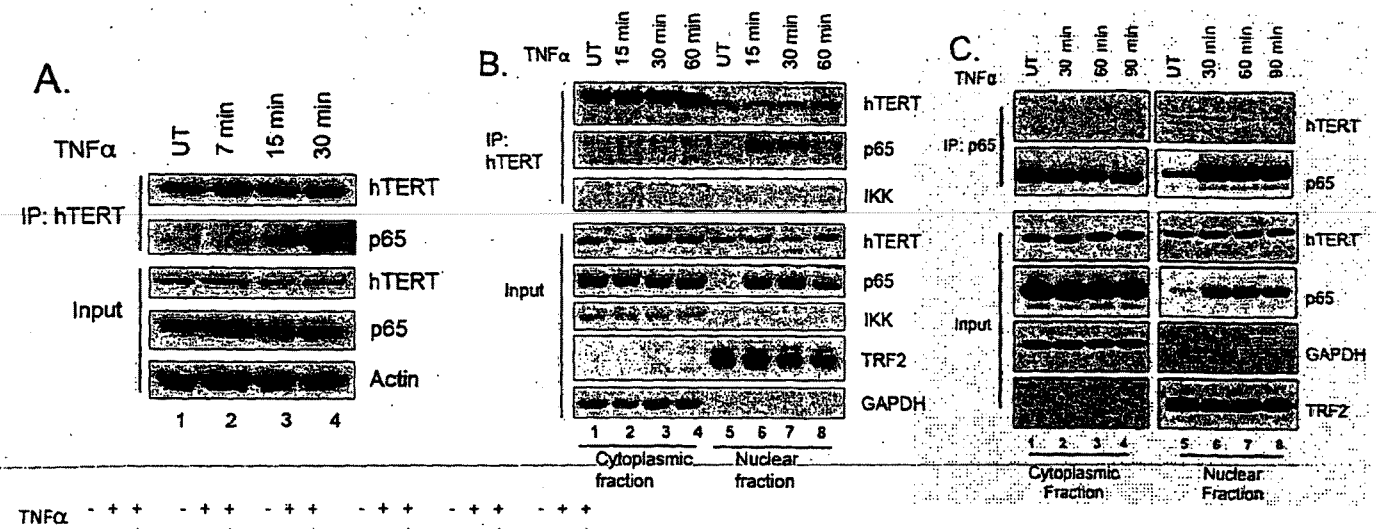
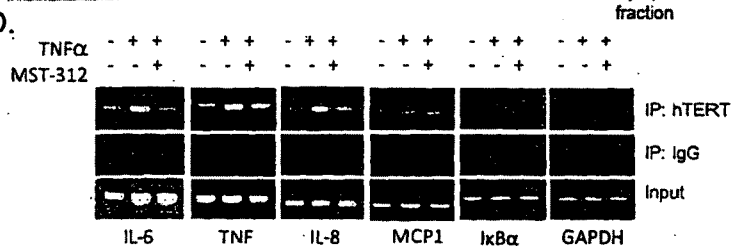
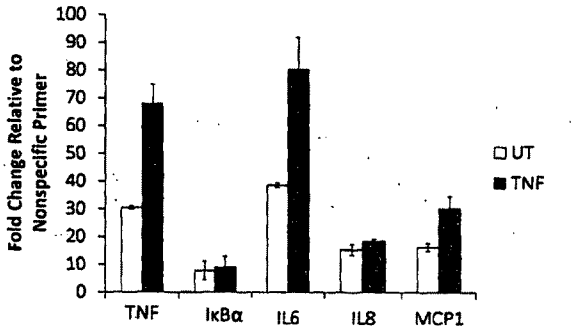
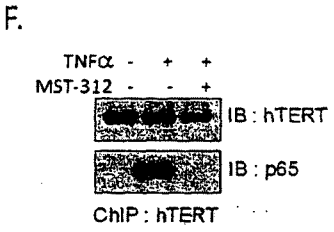

A.
Percent survival
100
75
50
25
0
0
5
10
15
20
Hours post GalN+LPS
WT
mTerc-/-
mTerc-/-/Rap1+/-
P-values < 0.05
B.
Percent survival
120
100
80
60
40
20
0
0
5
7
9
Hours post GalN+LPS
WT
mTERC-/-
mTERT-/-
C.
Relative fold expression
IL6
TNF
IκBα
MCP1
mTERC
TNFα - + - +
mTerc +/-
mTerc -/-
D.
Relative fold expression
IL6
TNF
IL1
IκBα
MCP1
mTERT
TNFα - + - +
mTERT +/+
mTERT -/-
E.
mTerc +/-
mTerc -/-
1 2 3 4

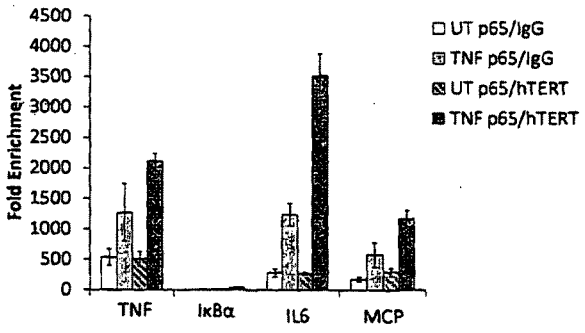
Figure 4

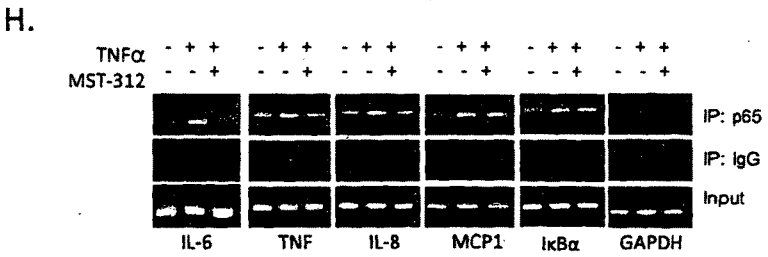

A.
TNFα
UT
7 min
15 min
30 min
IP: hTERT
hTERT
p65
Input
hTERT
p65
Actin
1 2 3 4
B.
TNFα
UT
15 min
30 min
60 min
UT
15 min
30 min
60 min
IP: hTERT
hTERT
p65
IKK
Input
hTERT
p65
IKK
TRF2
GAPDH
1 2 3 4 5 6 7 8
Cytoplasmic fraction
Nuclear fraction
C.
TNFα
5
30 min
60 min
90 min
5
30 min
60 min
90 min
IP: p65
hTERT
p65
Input
hTERT
p65
GAPDH
TRF2
1 2 3 4 5 6 7 8
Cytoplasmic Fraction
Nuclear Fraction

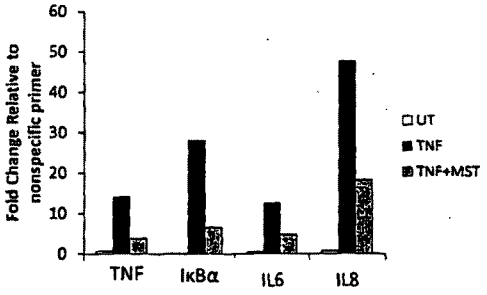

D.
TNFα
MST-312
IP: hTERT
IP: IgG
Input
IL-6
TNF
IL-8
MCP1
IκBα
GAPDH


E.
Fold Change Relative to Nonspecific Primer
100
90
80
70
60
50
40
30
20
10
0
UT
TNF
TNF
IκBα
IL6
IL8
MCP1


F.
TNFα
MST-312
IB : hTERT
IB : p65
ChIP : hTERT


G.
Fold Enrichment
4500
4000
3500
3000
2500
2000
1500
1000
500
0
UT p65/IgG
TNF p65/IgG
UT p65/hTERT
TNF p65/hTERT
TNF
IκBα
IL6
MCP


H.
TNFα
MST-312
IP: p65
IP: IgG
Input
IL-6
TNF
IL-8
MCP1
IκBα
GAPDH


Fold Change Relative to nonspecific primer
60
50
40
30
20
10
0
UT
TNF
TNF+MST
TNF
IκBα
IL6
IL8

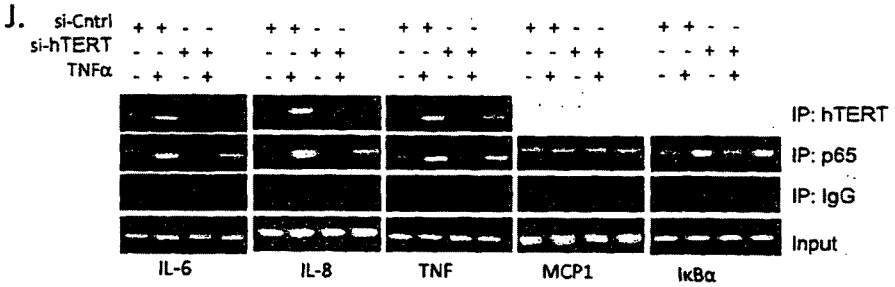
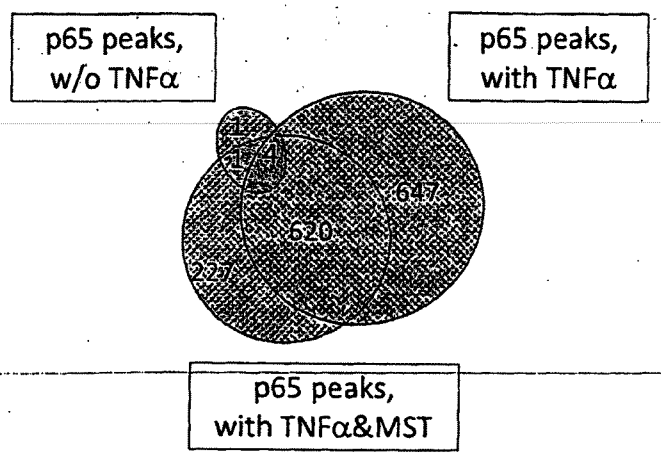
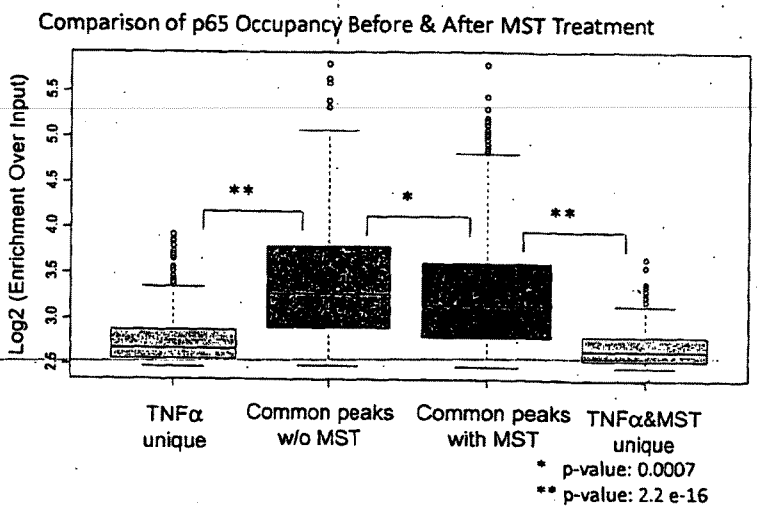

J.
si-Cntrl
si-hTERT
TNFα
IP: hTERT
IP: p65
IP: IgG
Input
IL-6
IL-8
TNF
MCP1
IκBα

Figure 5

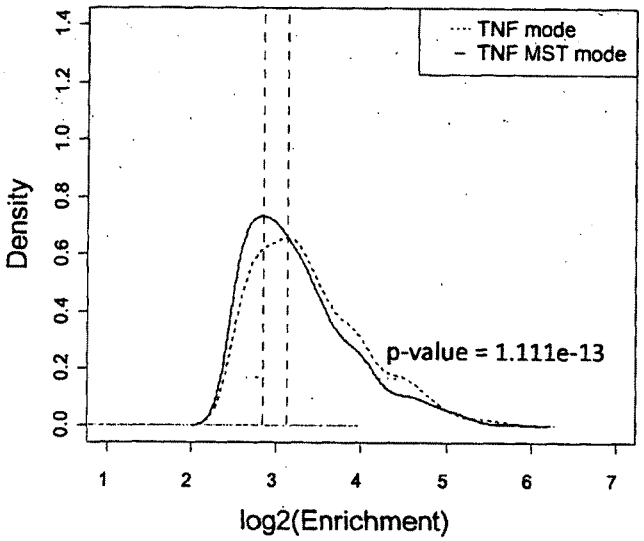
A



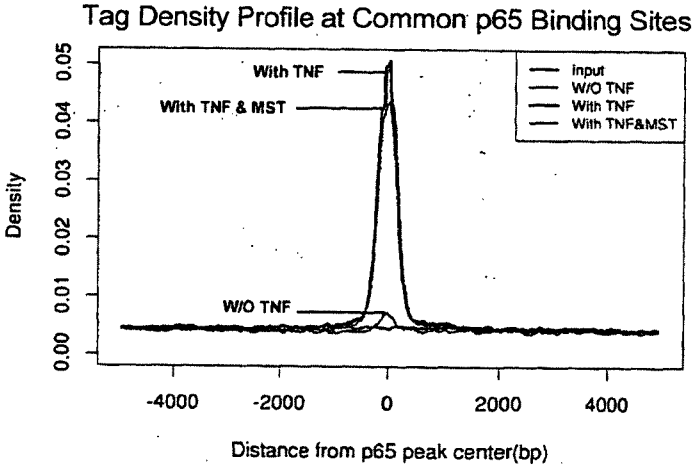
B

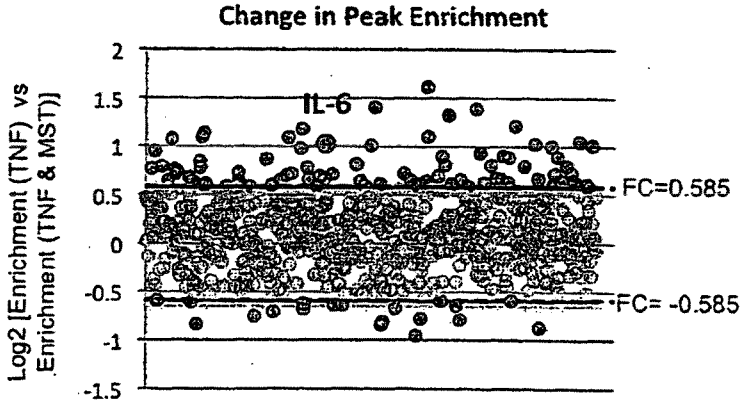


C



D

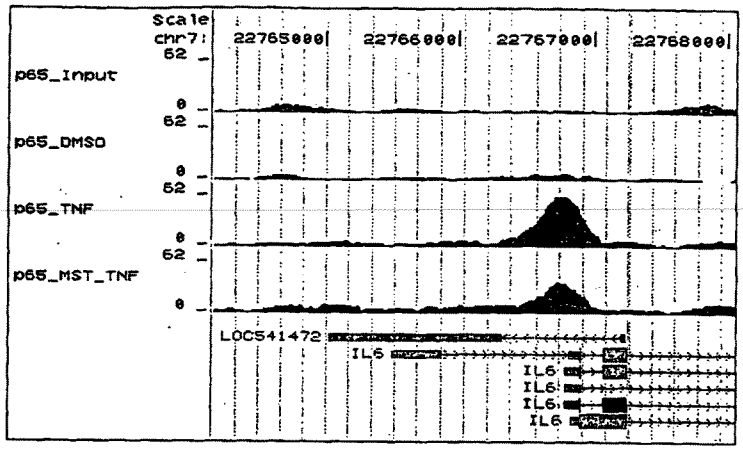




Number of Peaks	Percentage	Range of log2[Fold Change]
85	13.6	0.587 - 1.616
520	83.4	-0.576 - 0.574
19	3.04	-0.588 - -0.950

Figure 6

A.

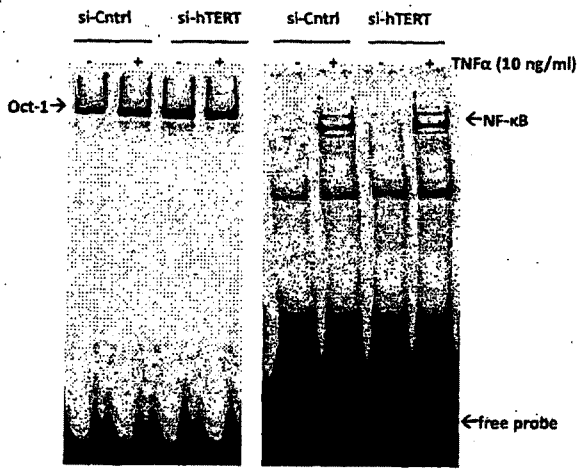


B.

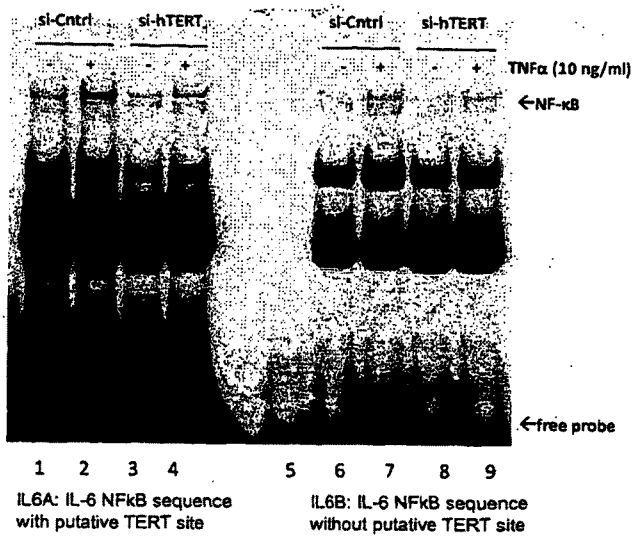
Oligonucleotide probe sequences for EMSA

NF-κB consensus	5'-TCA ACA GAG GGG ACT TTC CGA GAG GCC-3'
IL-6A	5'-ACT GGG AGG ATT CCC AAG GGG TCA ATT GGG AGA-3'
IL-6B	5'-ACT GGG AGG ATT CCC AAG GGG TCAA-3'
Oct-1	5'-TGT CGA ATG CAA ATC ACT AGA A-3'

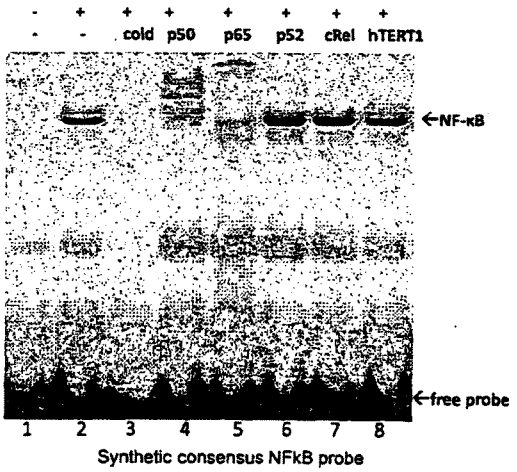
C.



D.



E.



F.

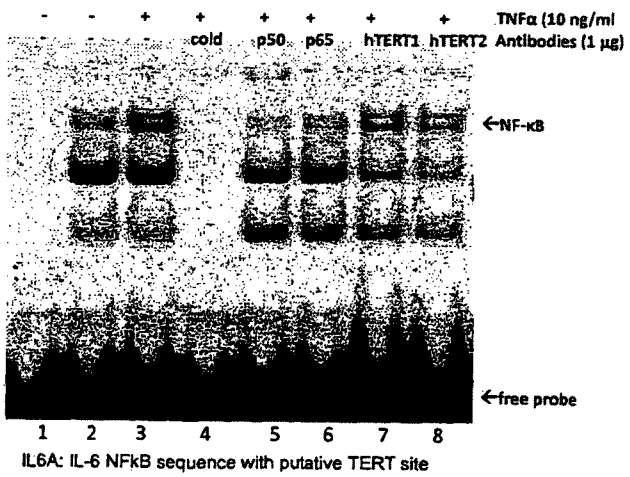
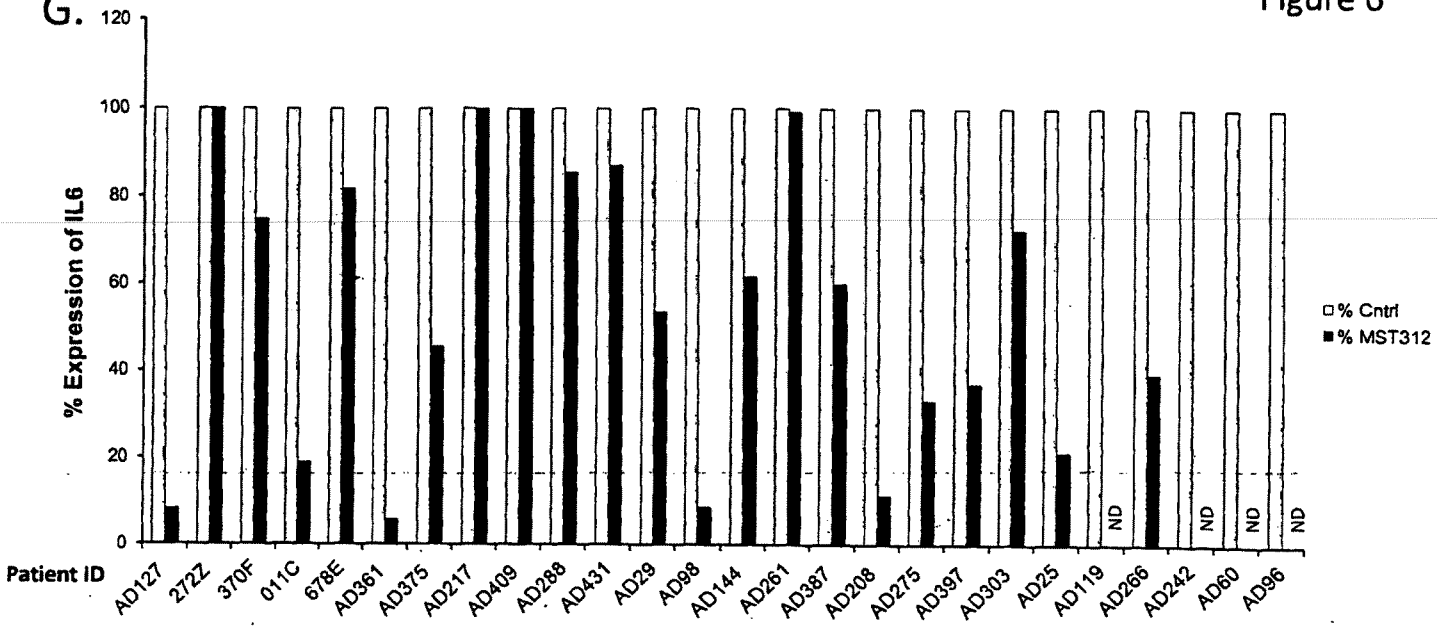


Figure 6

G.


% Expression of IL6
120
100
80
60
40
20
0
Patient ID
AD127
272Z
370F
011C
678E
AD361
AD375
AD217
AD409
AD288
AD431
AD29
AD98
AD144
AD261
AD387
AD208
AD275
AD397
AD303
AD25
AD119
AD266
AD242
AD60
AD96
ND
% Cntrl
% MST312

H.

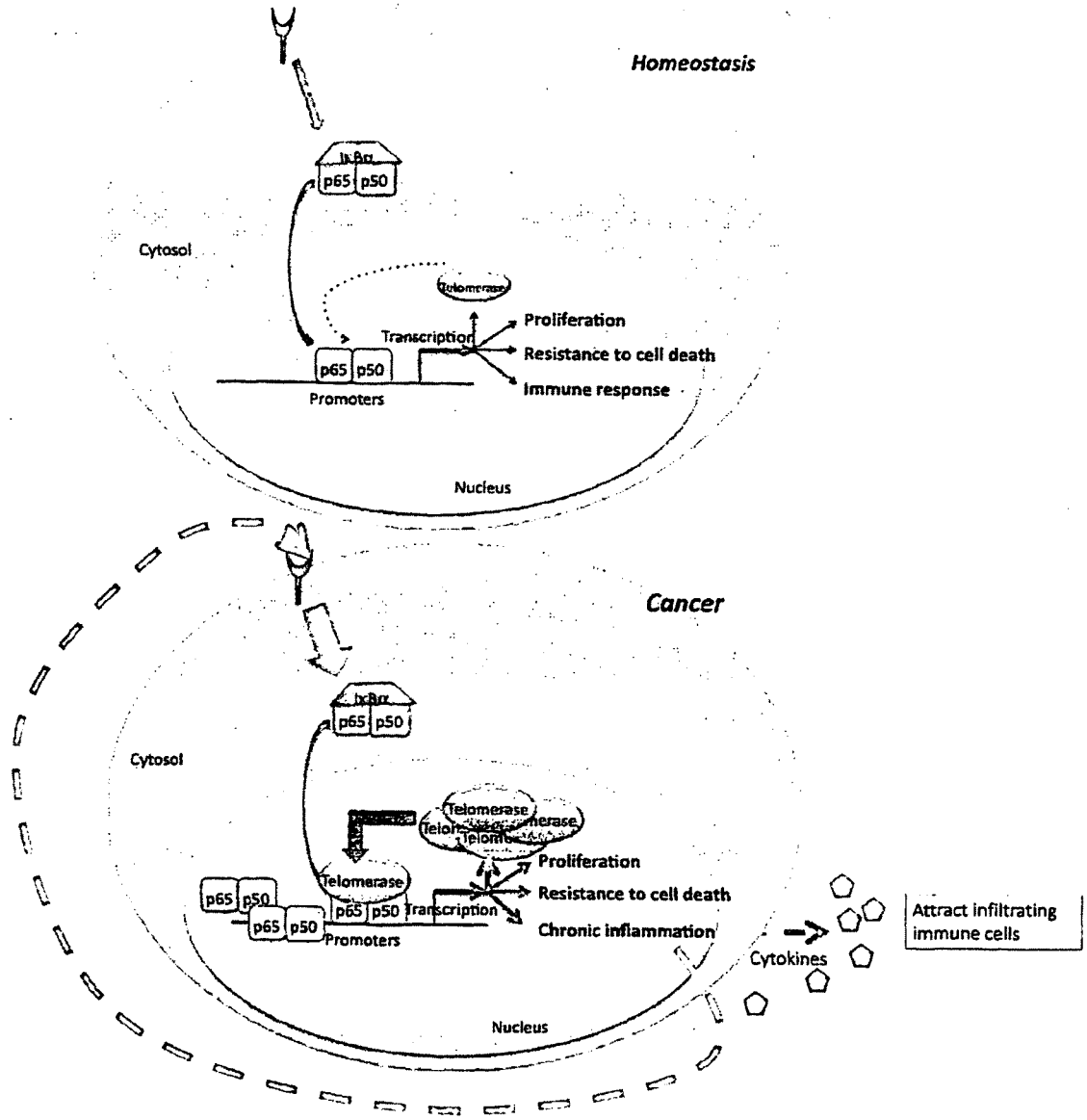
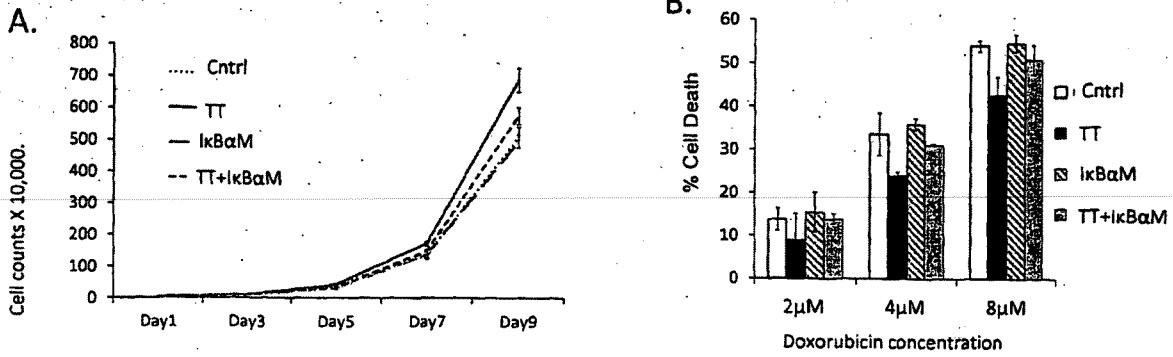
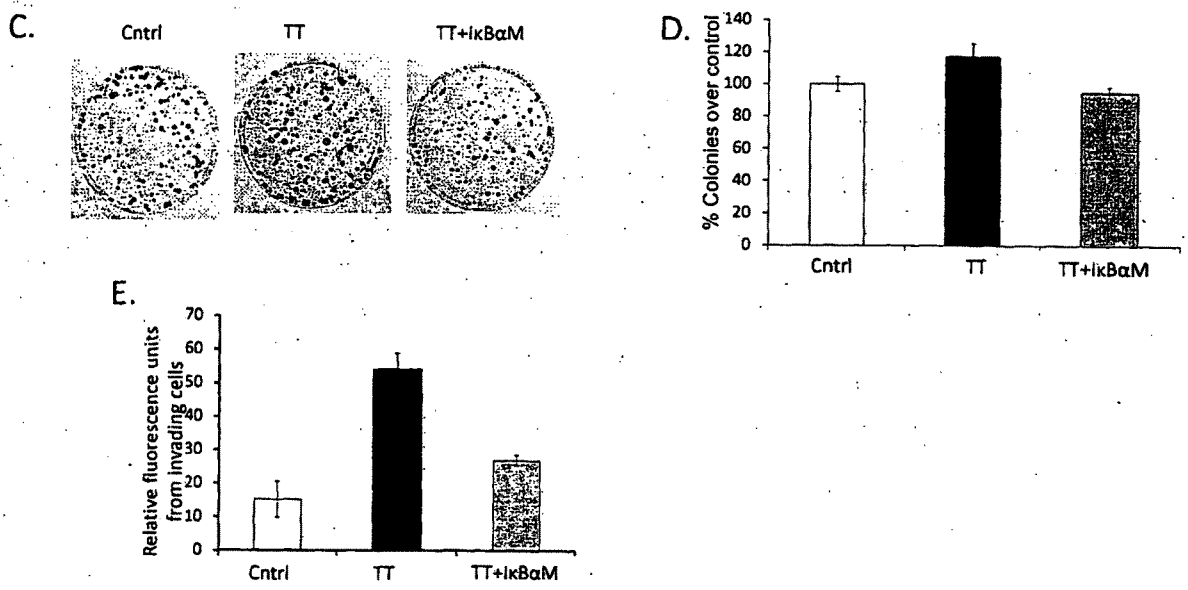

Homeostasis
IκBα
p65
p50
Cytosol
Telomerase
Transcription
Proliferation
Resistance to cell death
Immune response
Promoters
Nucleus
Cancer
Chronic inflammation
Cytokines
Attract infiltrating immune cells

Figure 7


A.
Cntrl
TT
IκBαM
TT+IκBαM
Cell counts X 10,000.
Day1
Day3
Day5
Day7
Day9
B.
% Cell Death
Cntrl
TT
IκBαM
TT+IκBαM
2μM
4μM
8μM
Doxorubicin concentration


C.
Cntrl
TT
TT+IκBαM
D.
% Colonies over control
Cntrl
TT
TT+IκBαM
E.
Relative fluorescence units from invading cells
Cntrl
TT
TT+IκBαM

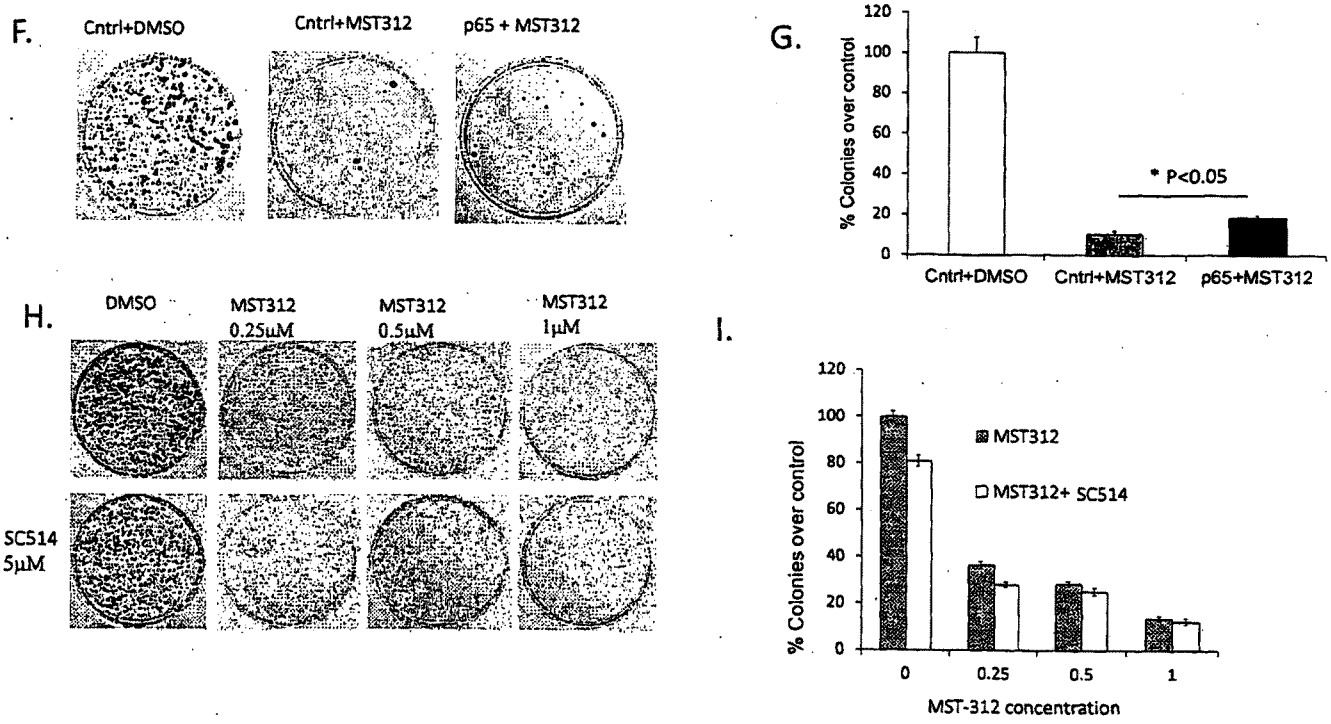

F.
Cntrl+DMSO
Cntrl+MST312
p65 + MST312
G.
% Colonies over control
* P<0.05
Cntrl+DMSO
Cntrl+MST312
p65+MST312
H.
DMSO
MST312 0.25μM
MST312 0.5μM
MST312 1μM
+ SC514 5μM
I.
% Colonies over control
MST312
MST312+ SC514
MST-312 concentration

Figure 8

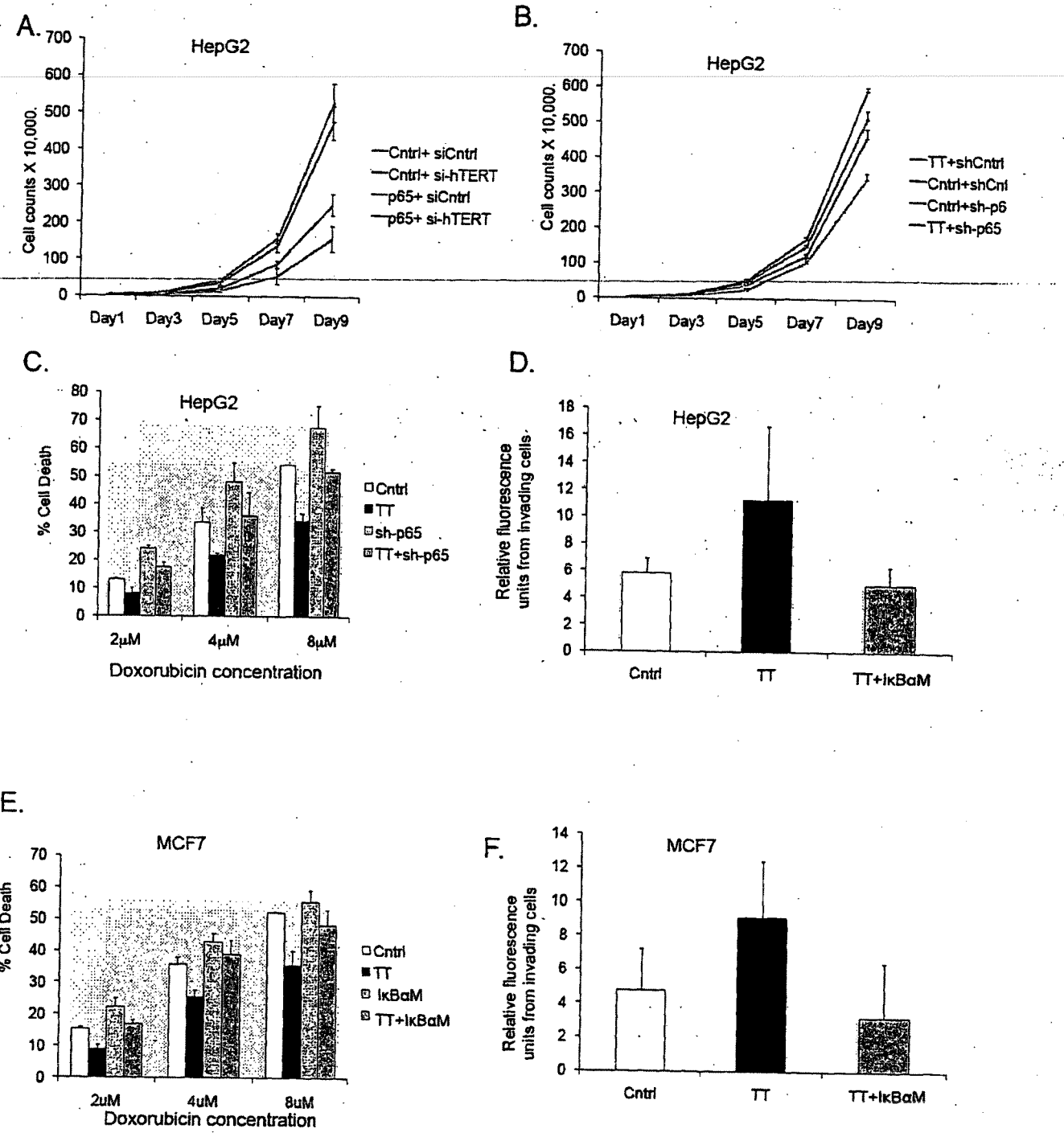

A.
HepG2
Cell counts X 10,000.
Day1 Day3 Day5 Day7 Day9
Cntrl+ siCntrl
Cntrl+ si-hTERT
p65+ siCntrl
p65+ si-hTERT
B.
HepG2
Cell counts X 10,000.
Day1 Day3 Day5 Day7 Day9
TT+shCntrl
Cntrl+shCnt
Cntrl+sh-p6
TT+sh-p65
C.
HepG2
% Cell Death
Cntrl
TT
sh-p65
TT+sh-p65
2μM 4μM 8μM
Doxorubicin concentration
D.
HepG2
Relative fluorescence units from invading cells
Cntrl TT TT+IκBαM
E.
MCF7
% Cell Death
Cntrl
TT
IκBαM
TT+IκBαM
2uM 4uM 8uM
Doxorubicin concentration
F.
MCF7
Relative fluorescence units from invading cells
Cntrl TT TT+IκBαM

Figure 9

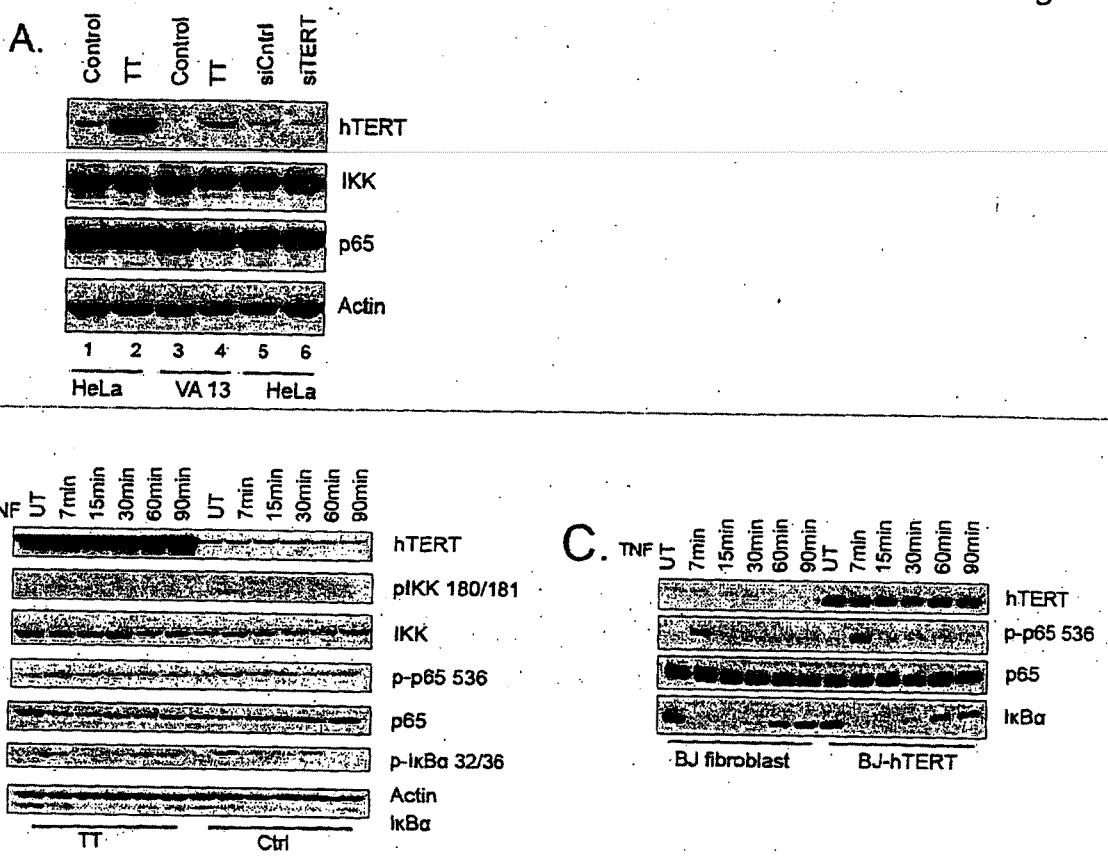


Figure 10

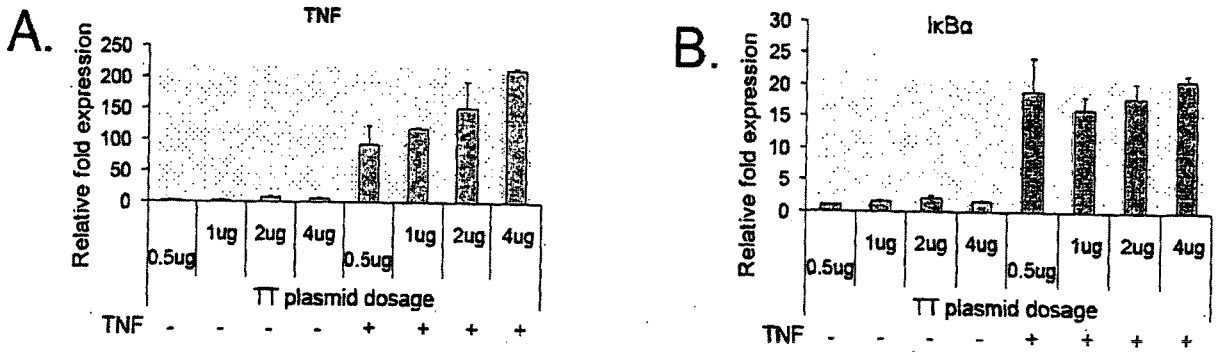
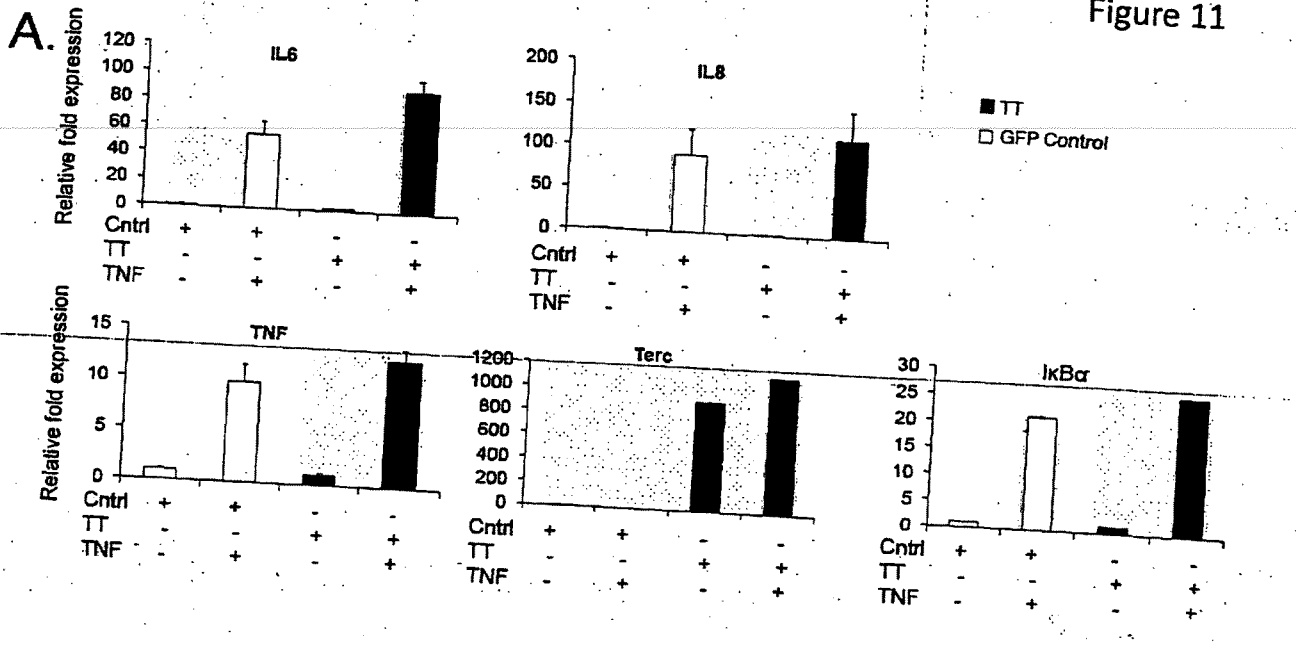
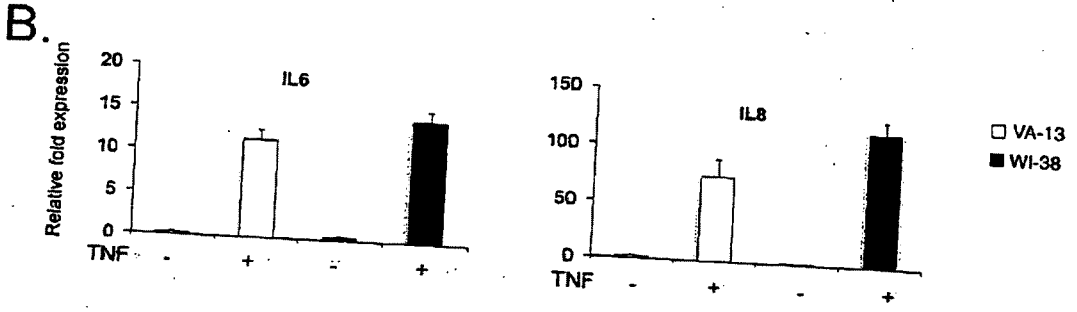


Figure 11


A.
IL6
IL8
TNF
Terc
IκBα
Relative fold expression
Cntrl
TT
TNF
TT
GFP Control


B.
IL6
IL8
Relative fold expression
TNF
VA-13
WI-38

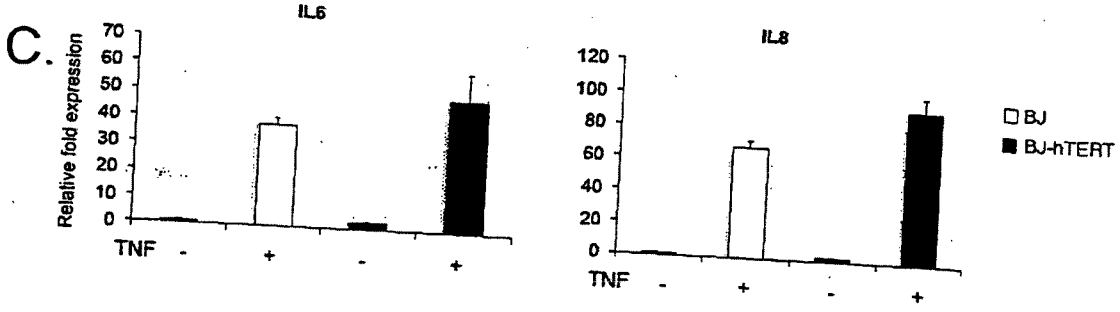

C.
IL6
IL8
Relative fold expression
TNF
BJ
BJ-hTERT

Figure 12



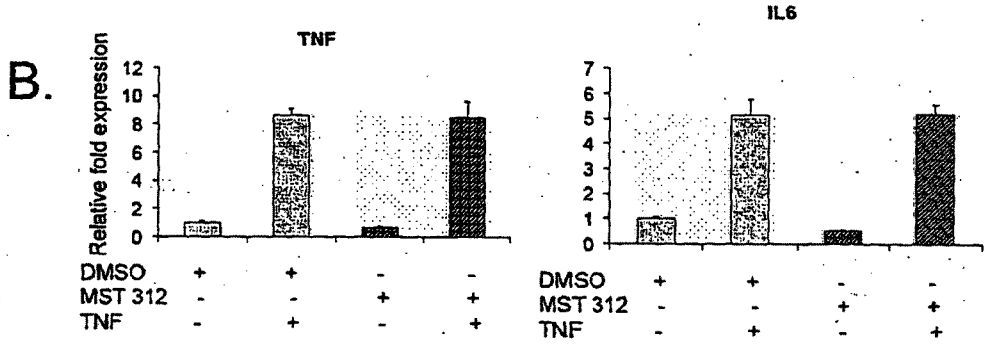
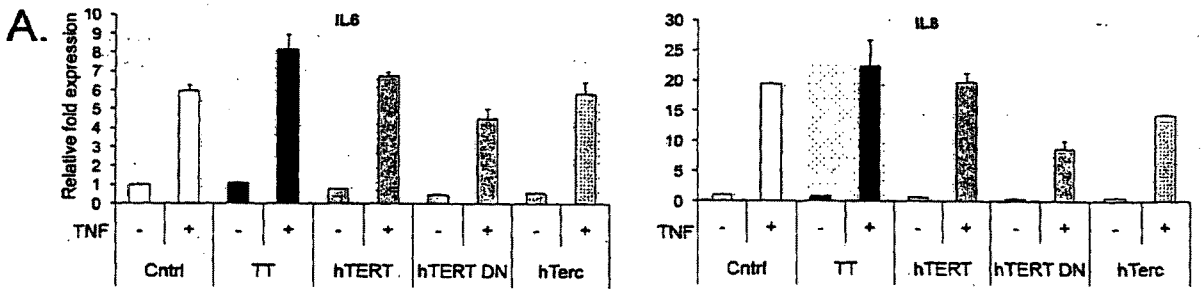


Figure 13



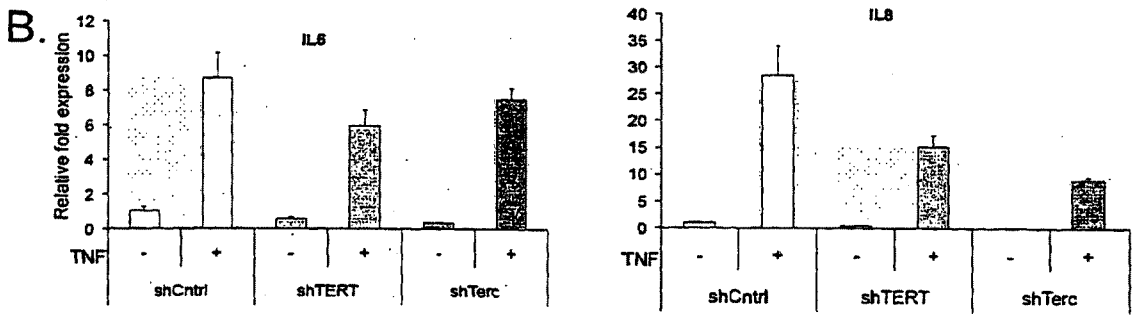


Figure 14

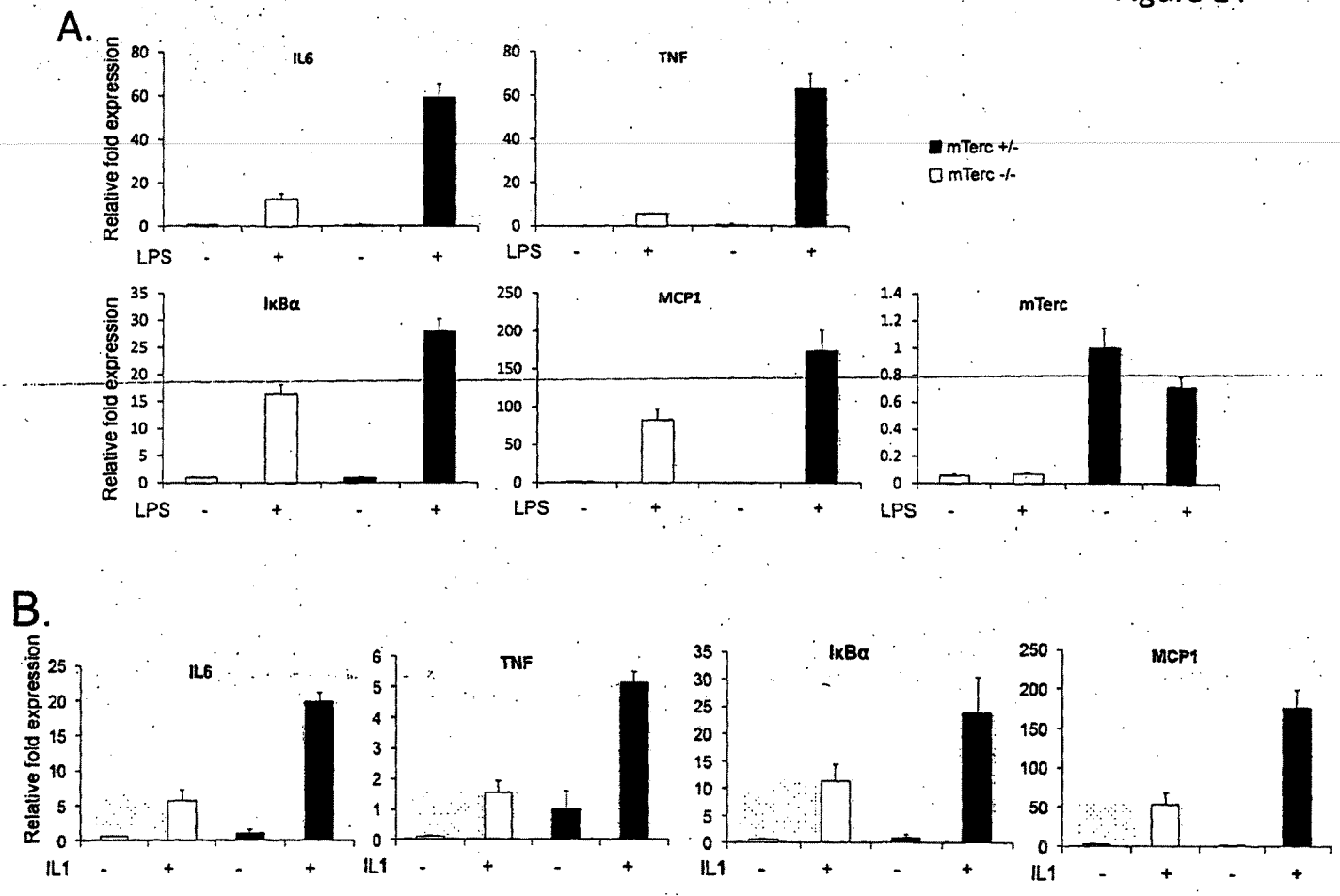

A.
IL6
TNF
IκBα
MCP1
mTerc
Relative fold expression
LPS
mTerc +/-
mTerc -/-
B.
IL6
TNF
IκBα
MCP1
Relative fold expression
IL1
C.
Bacteria Recovered
1.0×10^09
1.0×10^08
1.0×10^07
1000000
100000
10000
mTerc+/-
mTerc-/-
mTerc+/- / Rap+/-
mTerc-/- /Rap+/-
mTerc+/+

Figure 15

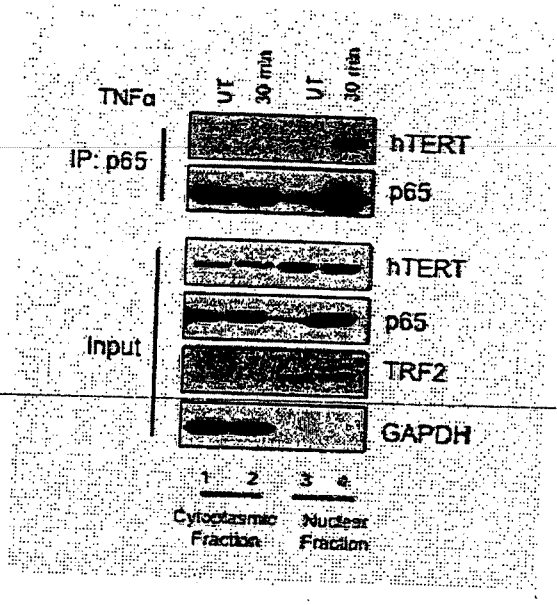
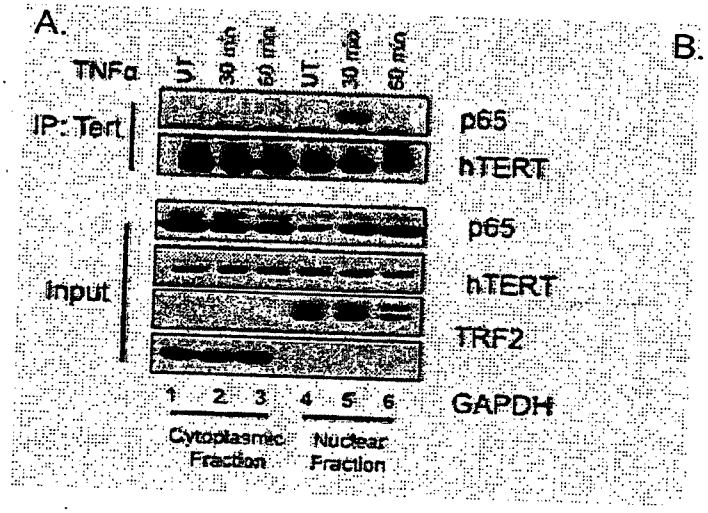
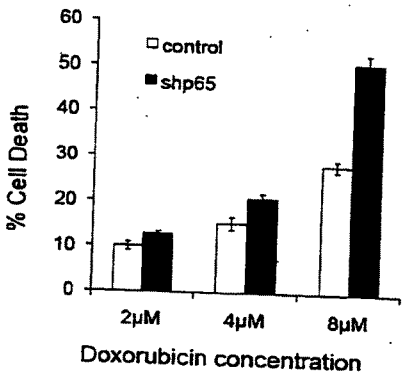
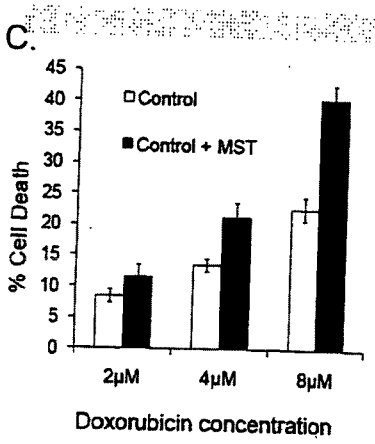
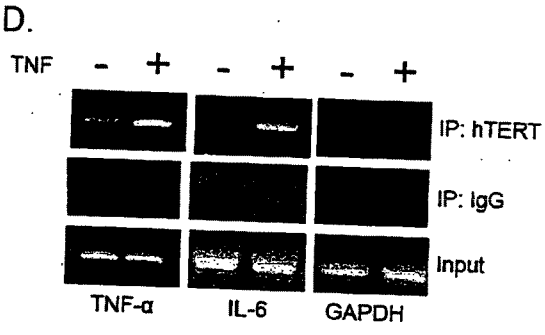


Figure 16









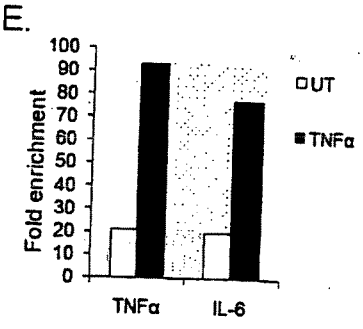
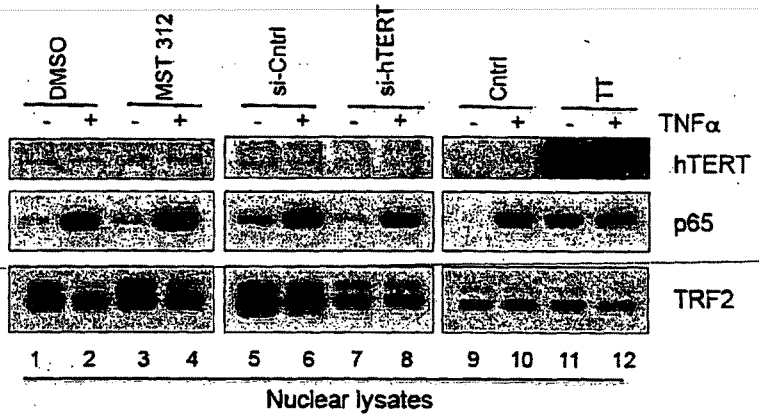


Figure 17

A.


DMSO
MST 312
si-Cntrl
si-hTERT
Cntrl
TT
TNFα
hTERT
p65
TRF2
1 2 3 4 5 6 7 8 9 10 11 12
Nuclear lysates

B.

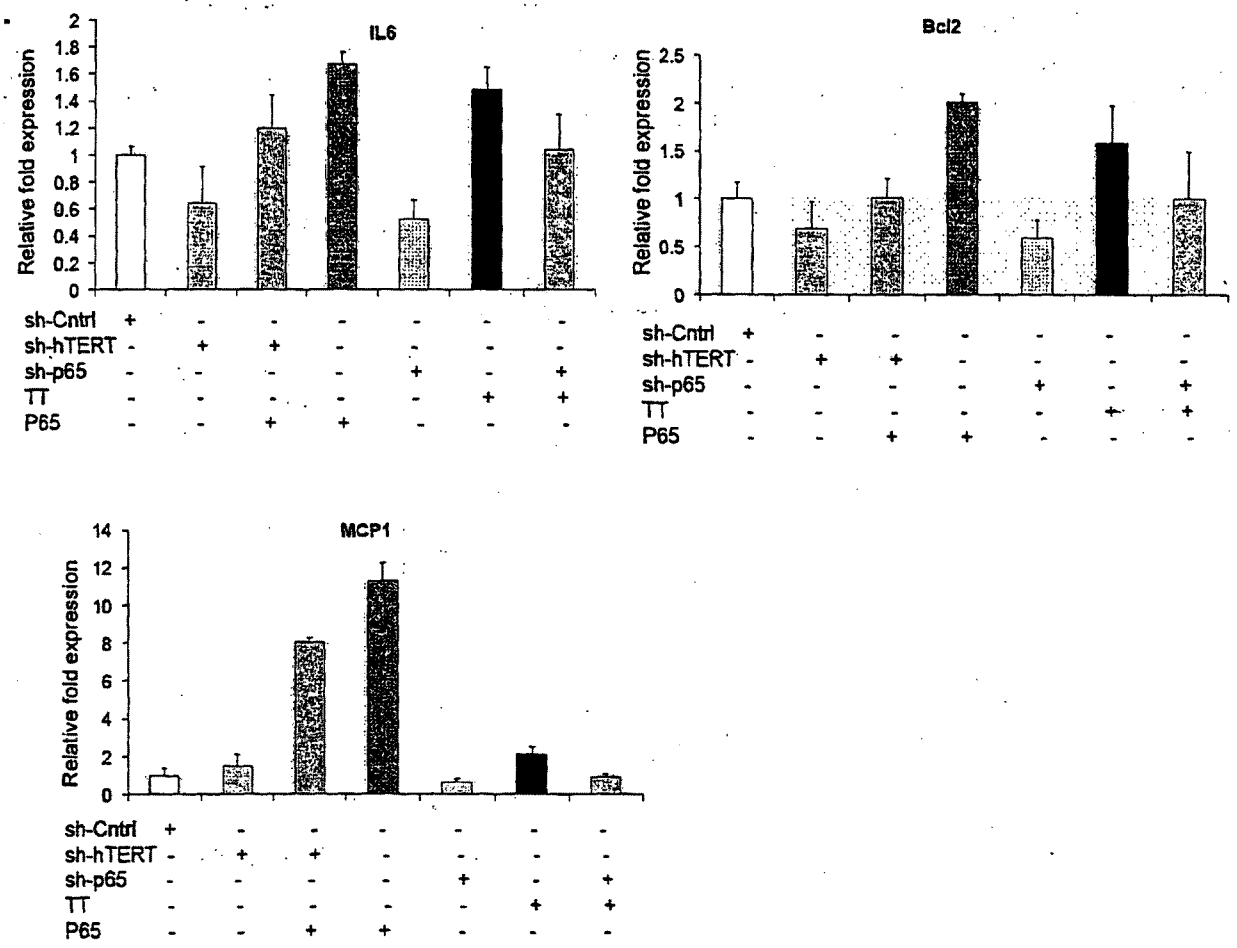

IL6
Relative fold expression
sh-Cntrl
sh-hTERT
sh-p65
TT
P65
Bcl2
Relative fold expression
sh-Cntrl
sh-hTERT
sh-p65
TT
P65
MCP1
Relative fold expression
sh-Cntrl
sh-hTERT
sh-p65
TT
P65

Figure 18

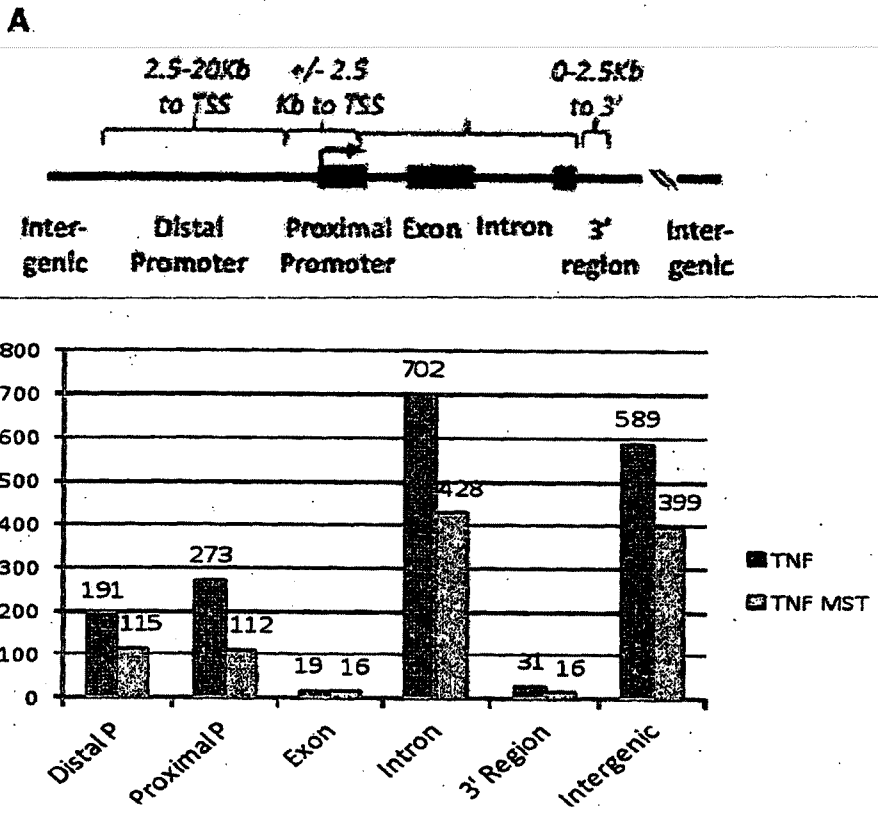


Figure 19

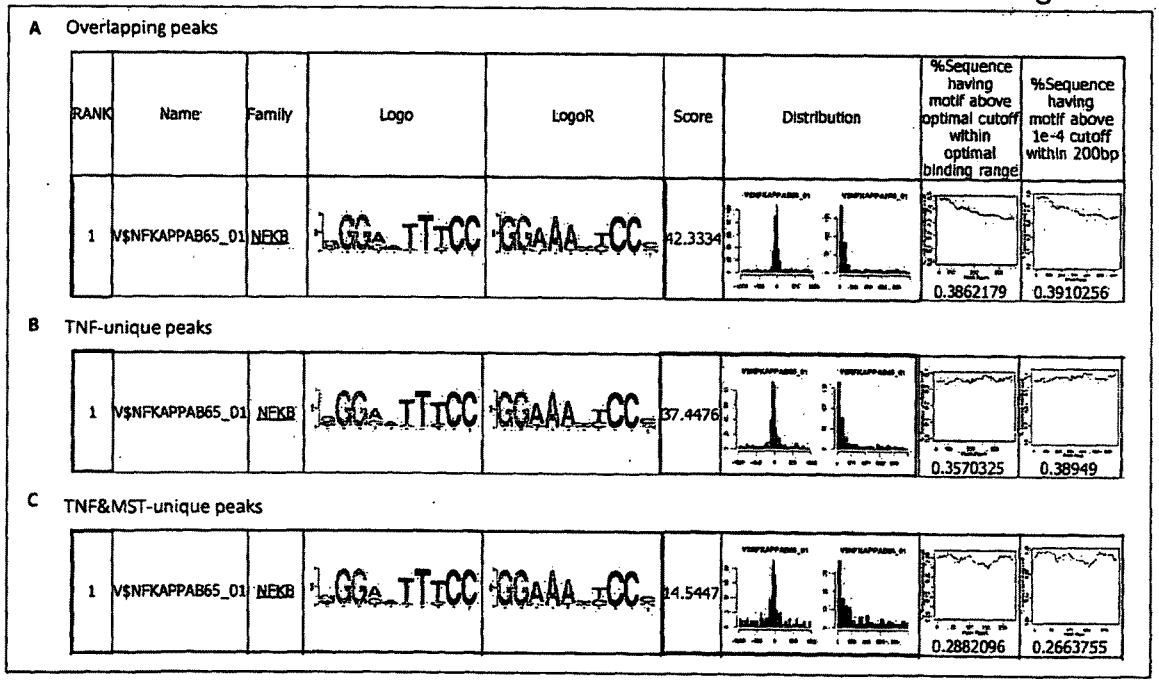
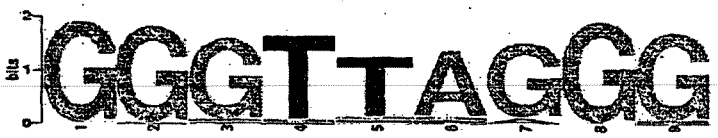


Figure 20

A



B

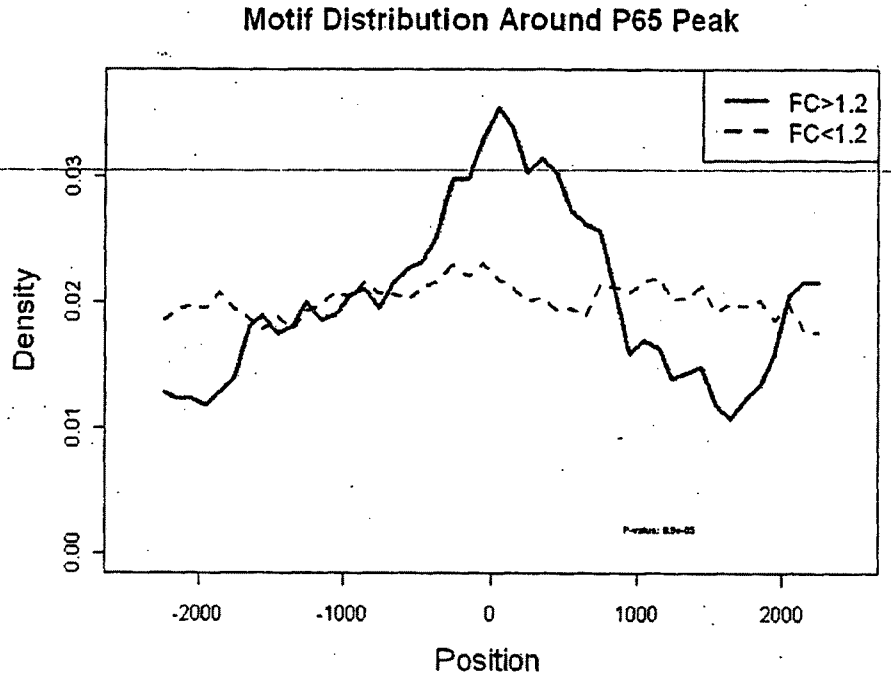


Figure 21

Term Name	Binomial p-value for "Common" peaks	Binomial p-value for "TNF unique" peaks
inflammatory response	6.36E-16	8.07E-08
negative regulation of cell death	9.14E-16	
defense response	3.35E-15	
negative regulation of apoptosis	1.85E-14	
negative regulation of programmed cell death	2.04E-14	
response to wounding	3.03E-14	
anti-apoptosis	2.64E-13	
immune response	5.07E-10	
regulation of cytokine biosynthetic process	7.22E-10	
response to biotic stimulus	7.27E-10	
response to other organism	1.69E-09	
cellular response to chemical stimulus	1.95E-08	
regulation of cytokine production	2.15E-08	1.29E-04
positive regulation of nitric oxide biosynthetic process	3.78E-08	
regulation of nitric oxide biosynthetic process	7.28E-08	
negative regulation of signaling pathway	1.50E-07	
response to virus	5.32E-07	
regulation of transcription factor activity	6.72E-07	3.88E-06
regulation of gene-specific transcription	1.46E-06	
regulation of cellular localization	1.48E-06	

Figure 22

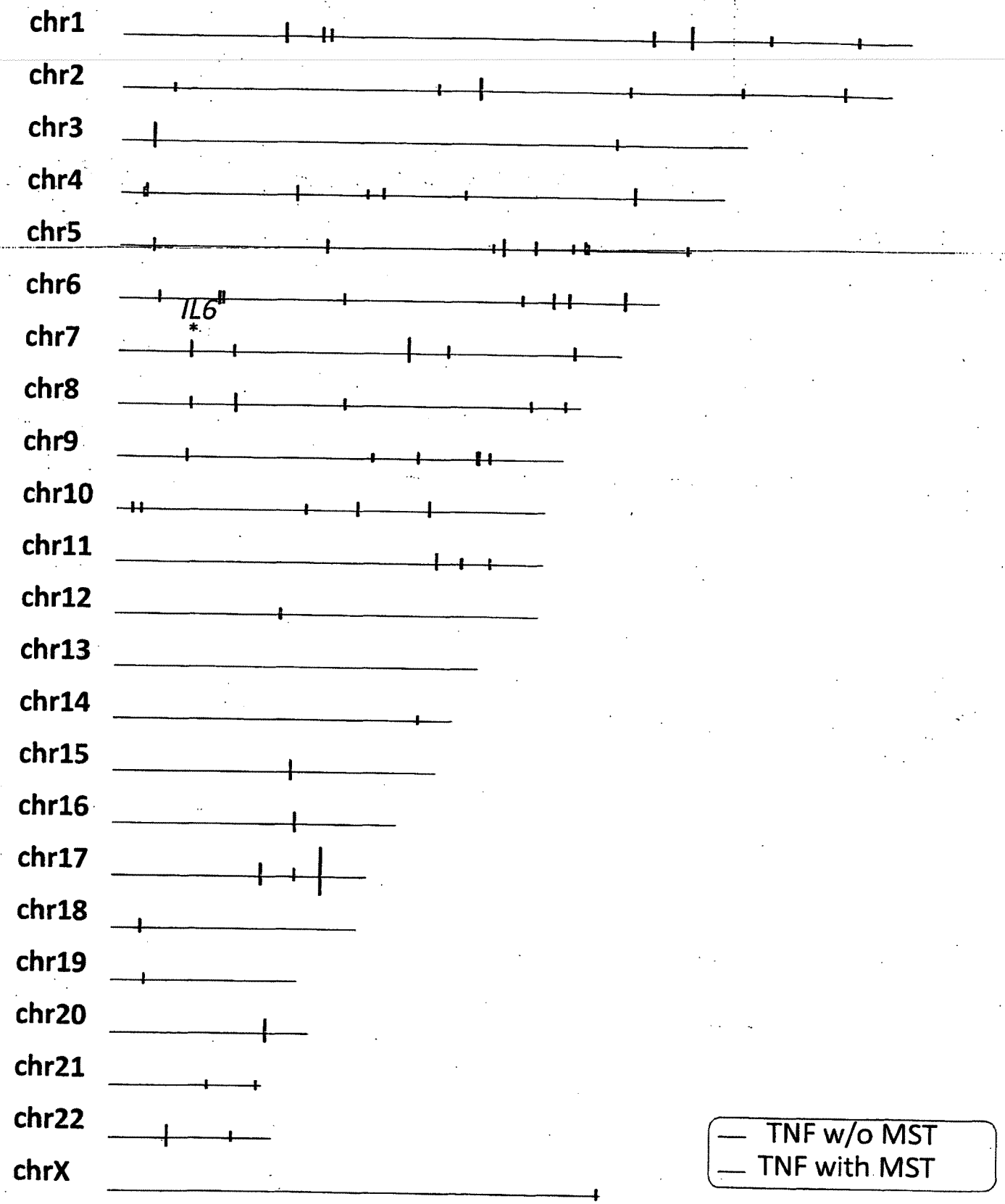

chr1
chr2
chr3
chr4
chr5
chr6
IL6
chr7
chr8
chr9
chr10
chr11
chr12
chr13
chr14
chr15
chr16
chr17
chr18
chr19
chr20
chr21
chr22
chrX
TNF w/o MST
TNF with MST

Figure 23

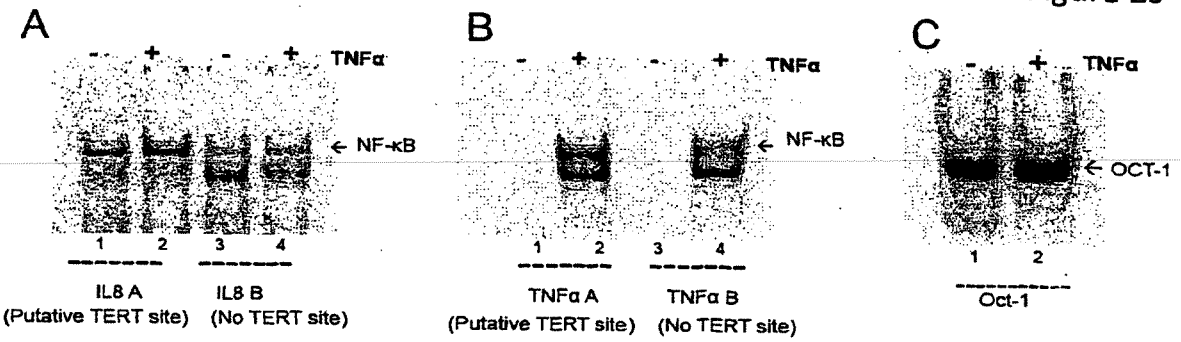


Figure 24

Patient sampleID	Diagnosis	Cytogenetics
AD127	ALL	Normal
272Z	ALL	46,XY,t(2;9;22)(p13;q34;q11.2)[19]/46,XY[1]
370F	CML	46,XY,t(9;22)(q34;q11.2)[2]/45,idem,-3[8]/46,XY[10]
011C	AML	46,XX,-12,+mar[8]/46,XX[3]
678E	AML	46,XY,del(11)(q?14q23),add(13)(q12)[18]/46,XY[2]
AD361	AML	ND
AD375	AML	46,XY,del(9)(p22),t(9;22)(q34;q11.2)[9]/ 46,idem,der(20)t(1;20)(q21;q?13.1)[5]/ 47,idem,+der(22)t(9;22)[4]/ 46,XY[2]
AD217	CML	46,XY,del(9)(q13q22),del(11)(q21),add(12)(p11.2),?del(16)(q22)[7]/46,XY[13]
AD409	AML	46,Y,der(X)?t(X;7)(q28;q11.2)[17]/46,XY[3]
AD288	AML	46,XY,del(20)(q11.2)[20]
AD431	AML	NA
AD29	AML	47,XY,+11[20]
AD98	AML	47,XY,+8[2]/46,XY[18]
AD144	CML	46,XY,del(4)(q21),der(5)t(4;5)(q21;q11.2)[2]/45,idem,der(2)t(2;14)(p13;q24)t(2;13)(q?33;q?12), -7,del(11)(p11.2),-13,der(14)t(2;14)(p13;q24),-17,+2mar[16]/ 46,XY[2]
AD261	ALL	45,XX,-7[14]/44,XX,add(1)(p36.1),-15,-20[cp4]/46,XX[2]
AD387	ALL	46,XY[20]
AD208	ALL	46,XX[10]
AD275	ALL	49, XY, der(1;7)(q10;p10), +8, +9, +21
AD397	ALL	46, XX
AD303	ALL	46,XX,add(7)(q22),t(14;19)(q32;p13)[1]/ 46,idem,add(1)(q42)[2],add(9)(p21)[2],del(11)(p14)[2],add(18)(q23)[3],del(20)(q13)[2][cp5]/ 46,XX[17]
AD25	AML	46,XX[50]
AD119	AML	46,XY,t(9;22)(q34;q11.2)[29]/ 47,idem,+mar[1]
AD266	ALL	46,XY,t(9;22)(q34;q11.2)[38]/46,idem,i(7)(q10)[2]
AD242	ALL	46,XY,t(2;9;22)(p13;q34;q11.2)[19]/46,XY[1]
AD60	CML	46,XY,t(9;22)(q34;q11)
AD96	CML	46,XX,t(9;22)(q34;q11.2)[25]
ALL - Acute Lymphocytic Leukemia		NA = Not available
AML - Acute Myeloid Leukemia		ND= not done/not requested
CML - Chronic Myeloid Leukemia		
CML-BC = CML in blast crisis		
CML-CP = CML in chronic phase		