Figure 1

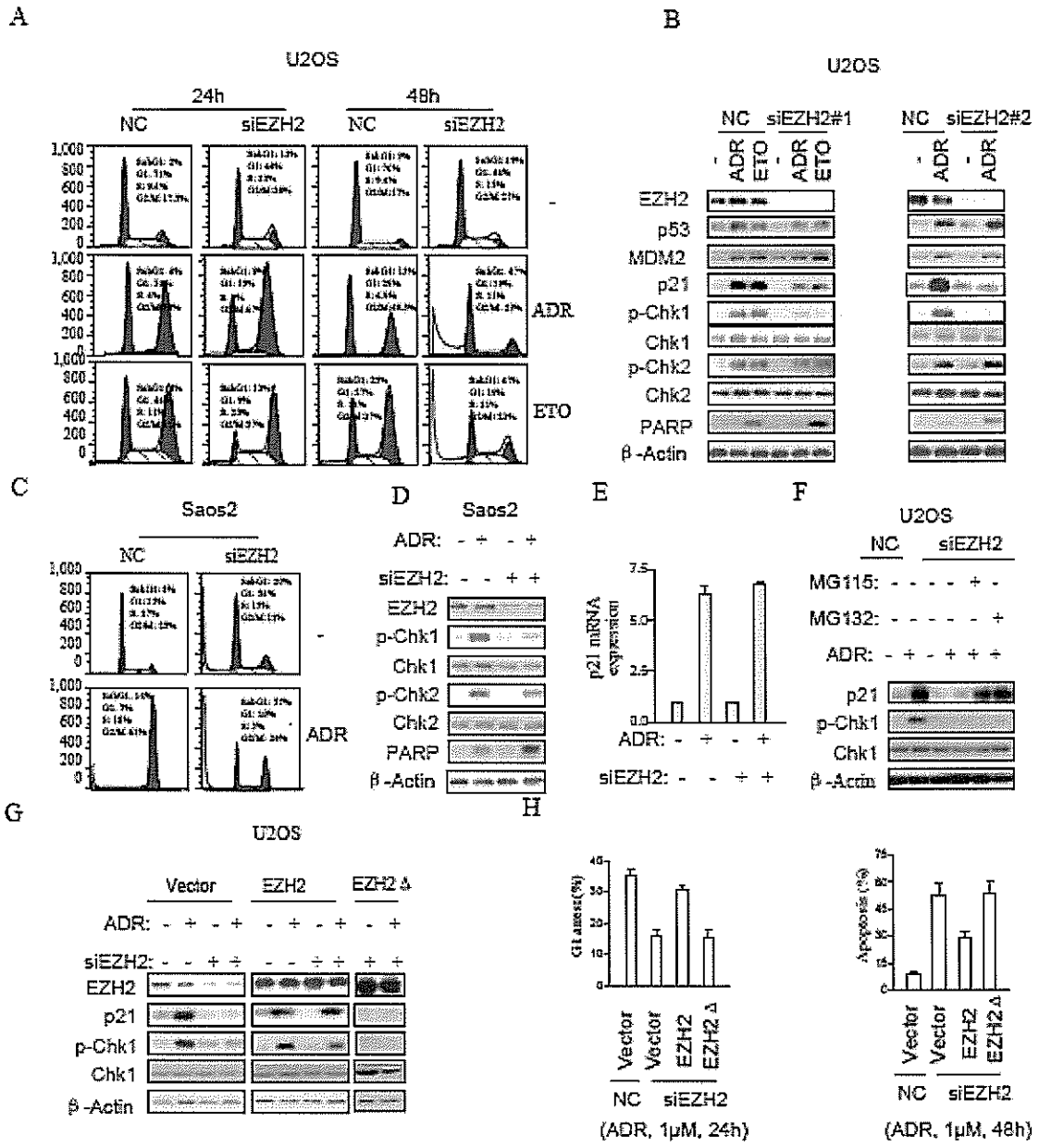

A
U2OS
24h
48h
NC
siEZH2
NC
siEZH2
-
ADR
ETO
B
U2OS
NC
siEZH2#1
NC
siEZH2#2
-
ADR
ETO
-
ADR
-
ADR
EZH2
p53
MDM2
p21
p-Chk1
Chk1
p-Chk2
Chk2
PARP
β-Actin
C
Saos2
NC
siEZH2
-
ADR
D
Saos2
ADR: - + - +
siEZH2: - - + +
EZH2
p-Chk1
Chk1
p-Chk2
Chk2
PARP
β-Actin
E
p21 mRNA expression
7.5
5.0
2.5
0.0
ADR: - + - +
siEZH2: - - + +
F
U2OS
NC
siEZH2
MG115: - - - - + -
MG132: - - - - - +
ADR: - + - + + +
p21
p-Chk1
Chk1
β-Actin
G
U2OS
Vector
EZH2
EZH2 Δ
ADR: - + - + - + - + - +
siEZH2: - - + + - - + + + +
EZH2
p21
p-Chk1
Chk1
β-Actin
H
G1 arrest(%)
Vector
Vector
EZH2
EZH2 Δ
NC
siEZH2
(ADR, 1μM, 24h)
Apoptosis (%)
Vector
Vector
EZH2
EZH2 Δ
NC
siEZH2
(ADR, 1μM, 48h)

Figure 2

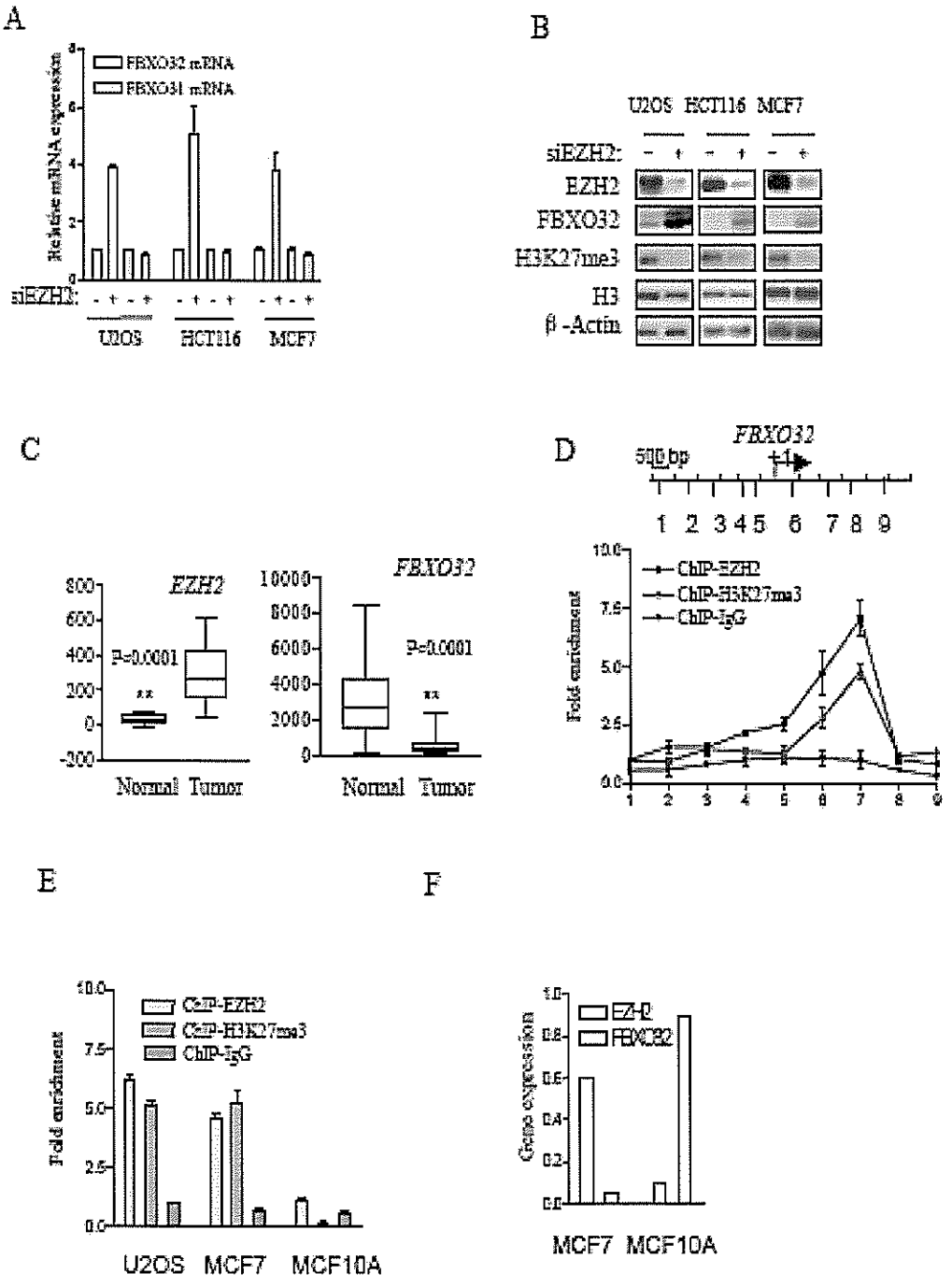

A
FBXO32 mRNA
FBXO31 mRNA
Relative mRNA expression
siEZH2:
U2OS
HCT116
MCF7
B
U2OS HCT116 MCF7
siEZH2:
EZH2
FBXO32
H3K27me3
H3
β-Actin
C
EZH2
P=0.0001
Normal Tumor
FBXO32
P=0.0001
Normal Tumor
D
FBXO32
500 bp
1 2 3 4 5 6 7 8 9
ChIP-EZH2
ChIP-H3K27me3
ChIP-IgG
Fold enrichment
E
ChIP-EZH2
ChIP-H3K27me3
ChIP-IgG
Fold enrichment
U2OS MCF7 MCF10A
F
EZH2
FBXO32
Gene expression
MCF7 MCF10A

Figure 3

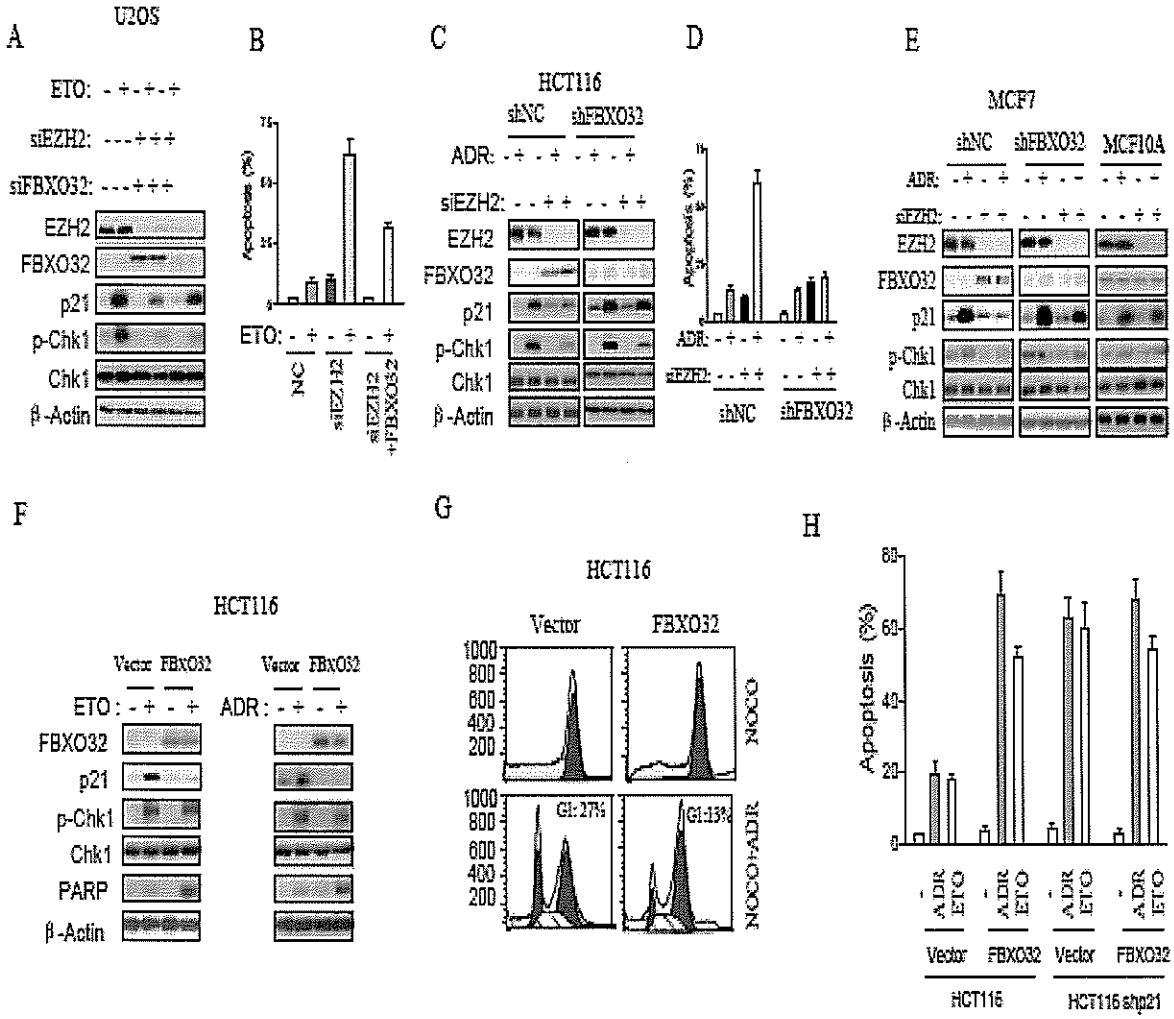
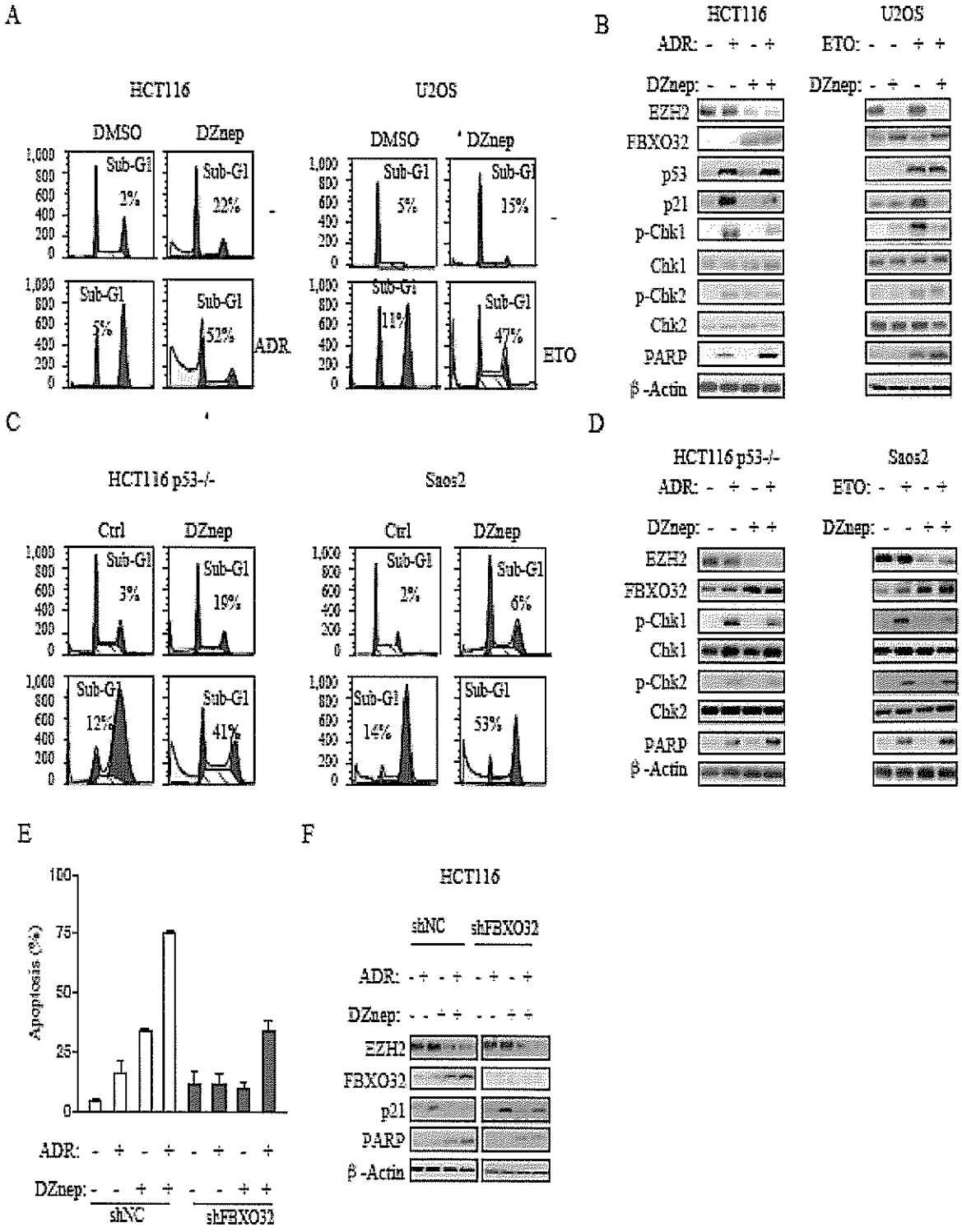

A
U2OS
ETO: - + - + - +
siEZH2: - - - + + +
siFBXO32: - - - + + +
EZH2
FBXO32
p21
p-Chk1
Chk1
β-Actin
B
Apoptosis (%)
ETO: - + - + - +
NC
siEZH2
siEZH2 +FBXO32
C
HCT116
shNC
shFBXO32
ADR: - + - + - + - +
siEZH2: - - + + - - + +
EZH2
FBXO32
p21
p-Chk1
Chk1
β-Actin
D
Apoptosis (%)
ADR: - + - + - + - +
siEZH2: - - + + - - + +
shNC
shFBXO32
E
MCF7
shNC
shFBXO32
MCF10A
ADR: - + - + - + - +
siEZH2: - - + + - - + +
EZH2
FBXO32
p21
p-Chk1
Chk1
β-Actin
F
HCT116
Vector
FBXO32
Vector
FBXO32
ETO: - + - + ADR: - + - +
FBXO32
p21
p-Chk1
Chk1
PARP
β-Actin
G
HCT116
Vector
FBXO32
1000
800
600
400
200
NOCO
G1: 27%
G1: 13%
NOCO+ADR
H
Apoptosis (%)
60
40
20
0
- ADR ETO
- ADR ETO
- ADR ETO
- ADR ETO
Vector
FBXO32
Vector
FBXO32
HCT116
HCT116 shp21

Figure 4


A
HCT116
U2OS
DMSO
DZnep
Sub-G1
2%
22%
5%
15%
5%
52%
11%
47%
ADR
ETO
B
HCT116
U2OS
ADR: - + - +
ETO: - - + +
DZnep: - - + +
DZnep: - + - +
EZH2
FBXO32
p53
p21
p-Chk1
Chk1
p-Chk2
Chk2
PARP
β-Actin
C
HCT116 p53-/-
Saos2
Ctrl
DZnep
3%
19%
2%
6%
12%
41%
14%
53%
D
HCT116 p53-/-
Saos2
ADR: - + - +
ETO: - + - +
DZnep: - - + +
DZnep: - - + +
E
Apoptosis (%)
100
75
50
25
0
ADR: - + - + - + - +
DZnep: - - + + - - + +
shNC
shFBXO32
F
HCT116
shNC
shFBXO32
ADR: - + - + - + - +
DZnep: - - + + - - + +
EZH2
FBXO32
p21
PARP
β-Actin