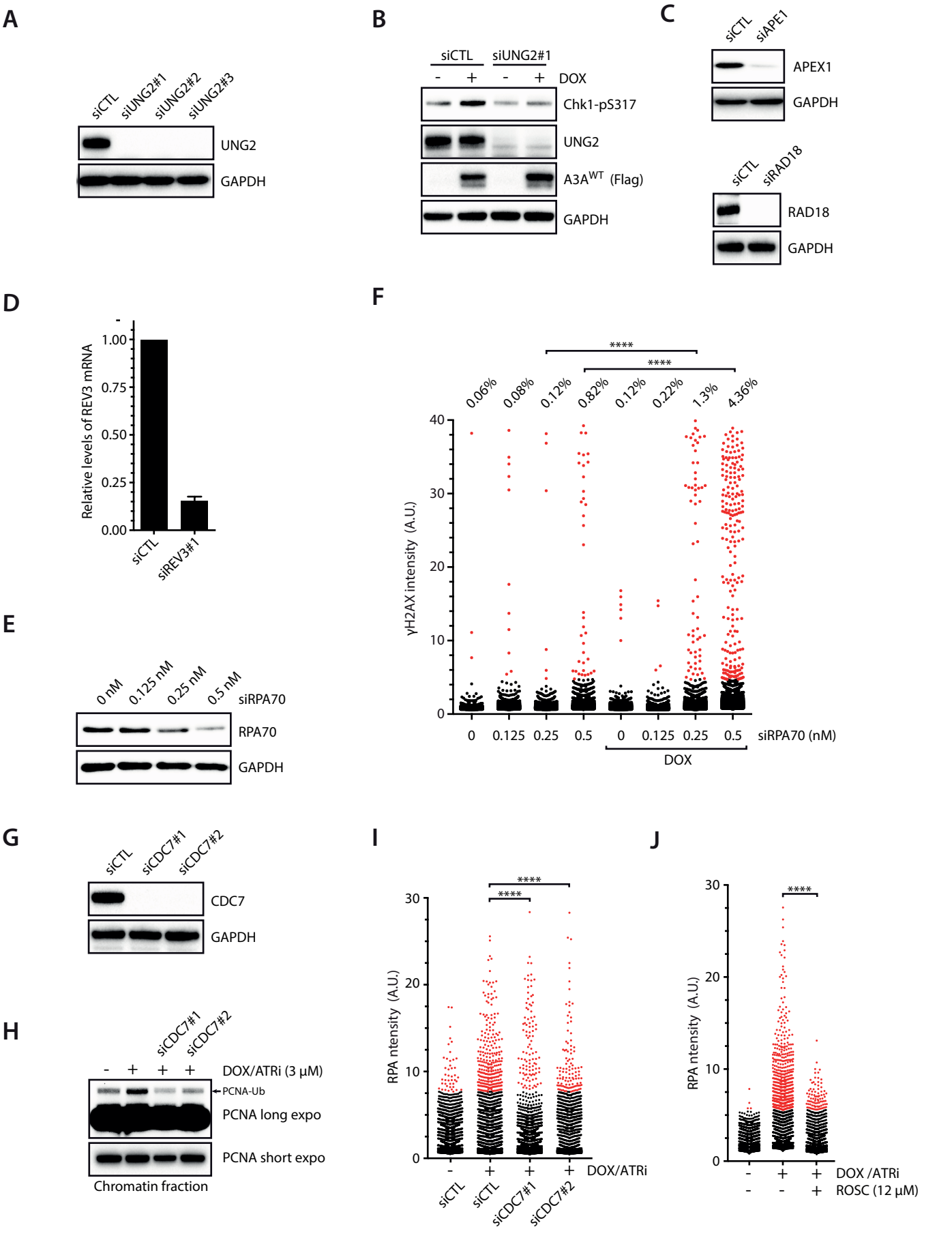
A
siCTL
siUNG2#1
siUNG2#2
siUNG2#3
UNG2
GAPDH
B
siCTL
siUNG2#1
- + - + DOX
Chk1-pS317
UNG2
A3A^WT (Flag)
GAPDH
C
siCTL
siAPE1
APEX1
GAPDH
siCTL
siRAD18
RAD18
GAPDH
D
Relative levels of REV3 mRNA
1.00
0.75
0.50
0.25
0.00
siCTL
siREV3#1
E
0 nM
0.125 nM
0.25 nM
0.5 nM
siRPA70
RPA70
GAPDH
F
****
****
0.06%
0.08%
0.12%
0.82%
0.12%
0.22%
1.3%
4.36%
γH2AX intensity (A.U.)
40
30
20
10
0
0
0.125
0.25
0.5
0
0.125
0.25
0.5
siRPA70 (nM)
DOX
G
siCTL
siCDC7#1
siCDC7#2
CDC7
GAPDH
H
siCDC7#1
siCDC7#2
- + + + DOX/ATRi (3 μM)
PCNA-Ub
PCNA long expo
PCNA short expo
Chromatin fraction
I
****
****
RPA ntensity (A.U.)
30
20
10
0
- + + + DOX/ATRi
siCTL
siCTL
siCDC7#1
siCDC7#2
J
****
RPA ntensity (A.U.)
30
20
10
0
- + + DOX /ATRi
- - + ROSC (12 μM)

Supplementary Figure S5. Factors affecting the induction of ssDNA and DNA damage by ATRi in APOBEC3A-expressing cells. **A.** Knockdown of UNG2 with 3 independent siRNAs. **B.** Inducible A3A^{WT}-expressing cells were transfected with control or UNG2 siRNA, and left uninduced or induced with DOX. Levels of pChk1 were analyzed by Western blot. **C-D.** Knockdown of APE1 and RAD18 was confirmed by Western blot. Knockdown of REV3 was confirmed by RT-qPCR. **E.** Partial knockdown of RPA70 was confirmed by Western blot. **F.** Inducible A3A^{WT}-expressing cells were transfected with increasing amounts of RPA70 siRNA, and left uninduced or induced with DOX. Levels of γH2AX were quantified. Significance was determined by t-test. ****, P<0.0001. **G.** Knockdown of CDC7 by 2 independent siRNAs was confirmed by Western blot. **H-I.** Inducible A3A^{WT}-expressing cells were transfected with control or CDC7 siRNAs, left uninduced or induced with DOX, and treated with ATRi (3 μM) for 8 h. Levels of PCNA and mono-ubiquitinated PCNA in the chromatin fractions were analyzed by Western blot in H. Levels of chromatin-bound RPA were quantified in 2,000 cells and shown in I. Significance was determined by t-test. ****, P<0.0001. **J.** Inducible A3A^{WT}-expressing cells were left uninduced or induced with DOX, and treated with ATRi (3 μM) for 8 h. Roscovitine was used as indicated. Levels of chromatin-bound RPA in 2,000 cells were quantified. Significance was determined by t-test. ****, P<0.0001.