

**Supplementary Table S1.** Primer sequences and accession numbers of genes used in qRT-PCR.

| Gene            | Primer sequences (5'-3')                                   | Accession numbes |
|-----------------|------------------------------------------------------------|------------------|
| <i>Gapdh</i>    | F: GGCACAGTCAAGGCTGAGAATG<br>R: ATGGTGGTGAAGACGCCAGTA      | NM_001289726.1   |
| <i>Bax</i>      | F: CCAGGGTGGCTGGGAAG<br>R: CTTCCAGATGGTGAGCGAGG            | NM_007527.3      |
| <i>Bcl2</i>     | F: CGTCGTGACTTCGCAGAGAT<br>R: TAGTTCCACAAAGGCATCCCAG       | NM_009741.5      |
| <i>Caspase3</i> | F: GAGCTTGGAACGGTACGCTA<br>R: CCGTACCAGAGCGAGATGAC         | NM_001284409.1   |
| <i>Fasn</i>     | F: ACACATCCTAGGCATCCGAG<br>R: TTTCCTGAAGTTTCCGCAGC         | NM_007988.3      |
| <i>Acc</i>      | F: CCGTTGGCCAAAACCTCTGGAGCTAA<br>R: GAGCTGACGGAGGCTGGTGACA | XM_030245463.1   |
| <i>Srebf</i>    | F: GGAACTTTTCTTAACGTGGGC<br>R: AGCTGGAGCATGTCTTCGAT        | NM_001313979.1   |
| <i>Ppara</i>    | F: GTGCAGCCTCAGCCAAGTT<br>R: TGGGGAGAGAGGACAGATGG          | NM_001113418.1   |
| <i>Acox1</i>    | F: GATAAACTCCCCAAGATTCAA<br>R: AAGTCAAAGGCATCCACCAAA       | NM015729.2       |
| <i>Adipoq</i>   | F: GCTCCTGCTTTGGTCCCTCCAC<br>R: GCCCTTCAGCTCCTGTCATTCC     | NM_009605.4      |
| <i>Cpt1a</i>    | F: GACTCCGCTCGCTCATTCC<br>R: GGCAGATCTGTTTGAGGGCT          | NM_013495.2      |
| <i>Cyp7a1</i>   | F: CAACGGGTTGATTCCATACC<br>R: ATTTCCCCATCAGTTTGCAG         | NM_007824.3      |
| <i>Bsep</i>     | F: GGACAATGATGTGCTTGTGG<br>R: CACACAAAGCCCCTACCAGT         | NM_001363492.1   |
| <i>Fxr</i>      | F: CAGAAATGGCAACCAGTCATGTA<br>R: AAATCTCCGCCGAACGAA        | XM_030244963.2   |
| <i>Shp</i>      | F: CTCATGGCCTCTACCCTCAA<br>R: GGTCACCTCAGCAAAAGCAT         | NM_011850.3      |
| <i>Hamp</i>     | F: AGGGCAGACATTGCGATACC<br>R: GCAACAGATACCACACTGGGA        | NM_032541.2      |
| <i>Dmt1</i>     | F: TGGCTCCTGGGATATGGAGT<br>R: TGCTGTAGGCAGGGTTGATG         | NM_001356952.1   |
| <i>Tfrc</i>     | F: TCATGAGGGAAATCAATGATC<br>R: GCCCCAGAAGATATGTGCGAA       | XM_036159875.1   |
| <i>Slc39a14</i> | F: TTTCCCAGCCCCAAGGAAG<br>R: CAAAGAGGTCTCCAGAGCTAAA        | XM_030247713.2   |

*Fpn* F: ATGGGAACTGTGGCCTTCAC  
R: TCCAGGCATGAATACGGAGA

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XM\_006496137.4

**Supplementary Table S2. Details of antibodies.**

| Antibodies                              | Cat No.     | Source                        | Dilution     |
|-----------------------------------------|-------------|-------------------------------|--------------|
| GAPDH                                   | 60004-1     | Proteintech, Chicago, USA     | 1:50000 (WB) |
| FTH                                     | Bs-8679R    | Bioss, Beijing, China         | 1:1000 (WB)  |
| KEAP1                                   | 10503-2-AP  | Proteintech, Chicago, USA     | 1:5000 (WB)  |
| HO-1                                    | 10701-1-AP  | Proteintech, Chicago, USA     | 1:3000 (WB)  |
| BAX                                     | 50599-2-Ig  | Proteintech, Chicago, USA     | 1:5000 (WB)  |
| BCL2                                    | 26593-1-AP  | Proteintech, Chicago, USA     | 1:2000 (WB)  |
| PARP1                                   | 13371-1-AP  | Proteintech, Chicago, USA     | 1:1000 (WB)  |
| PRDX2                                   | 10545-2-AP  | Proteintech, Chicago, USA     | 1:5000 (WB)  |
| $\gamma$ H2A.X                          | 2577        | CST, Beverly, MA, USA         | 1:400 (IF)   |
| CPT1A                                   | 15184-1--AP | Proteintech, Chicago, USA     | 1:5000 (WB)  |
| PPARA                                   | 15540-1-AP  | Proteintech, Chicago, USA     | 1:1000 (WB)  |
| FASN                                    | 10624-2-AP  | Proteintech, Chicago, USA     | 1:5000 (WB)  |
| CYP7A1                                  | DF2612      | Affinity, Cincinnati, OH, USA | 1:1000 (WB)  |
| FXR                                     | A12788      | Abclonal                      | 1:1000 (WB)  |
| BSEP                                    | DF9278      | Affinity, Cincinnati, OH, USA | 1:1000 (WB)  |
| Anti-rabbit IgG(H+L)                    | SA00001-2   | Proteintech, Chicago, USA     | 1:4000 (WB)  |
| HRP-labeled Goat<br>Anti-Mouse IgG(H+L) | SA00001-1   | Proteintech, Chicago, USA     | 1:4000 (WB)  |

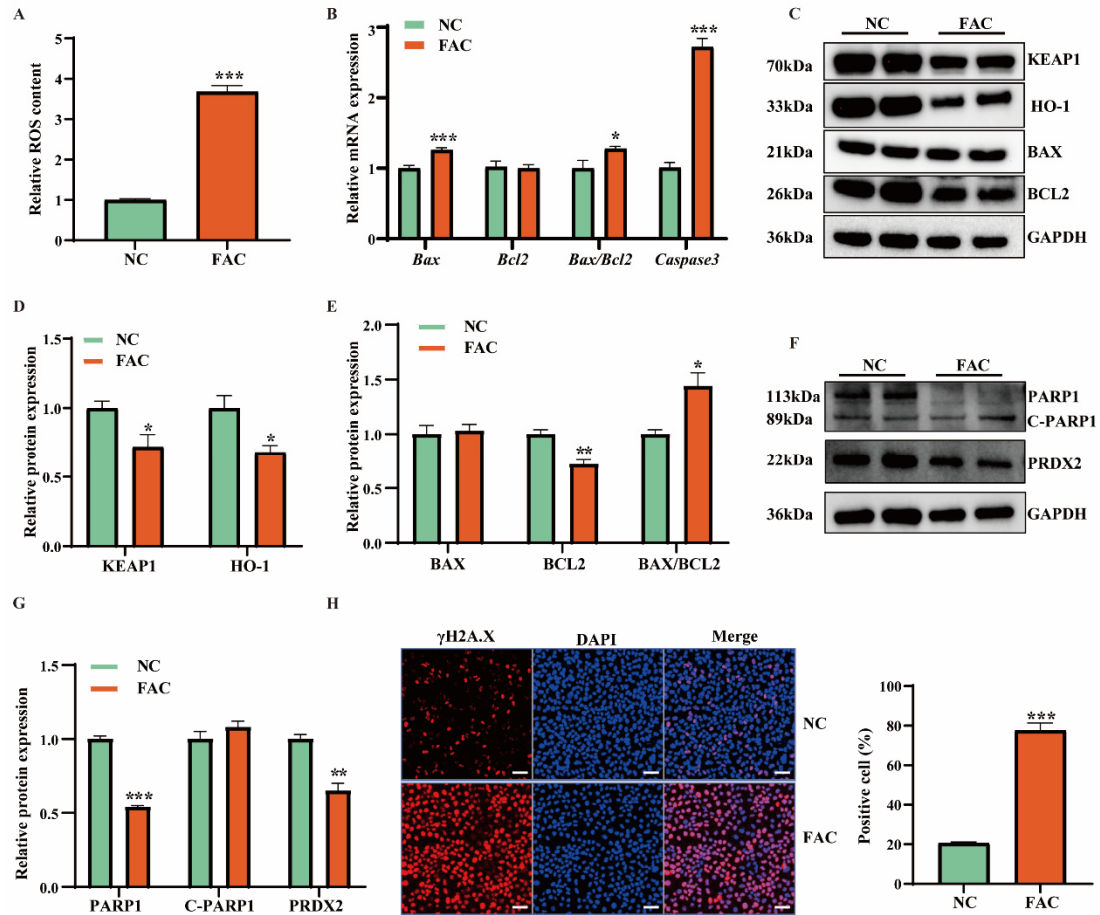


Figure S1. Effects of iron overload on oxidative stress, apoptosis, and genomic stability in AML12.

A: Relative ROS content in AML12 cells treated with or without FAC.

B: qRT-PCR analysis of apoptosis-related genes.

C-E: Western blot analysis of antioxidant-related proteins and apoptosis-related proteins.

F-G: Western blot analysis of genomic stability-related proteins.

H: Immunofluorescence analysis of DNA damage marker  $\gamma$ H2A.X. Scale bar, 50  $\mu$ m.

Statistical significance was indicated as \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ , determined using a two-tailed t-test.

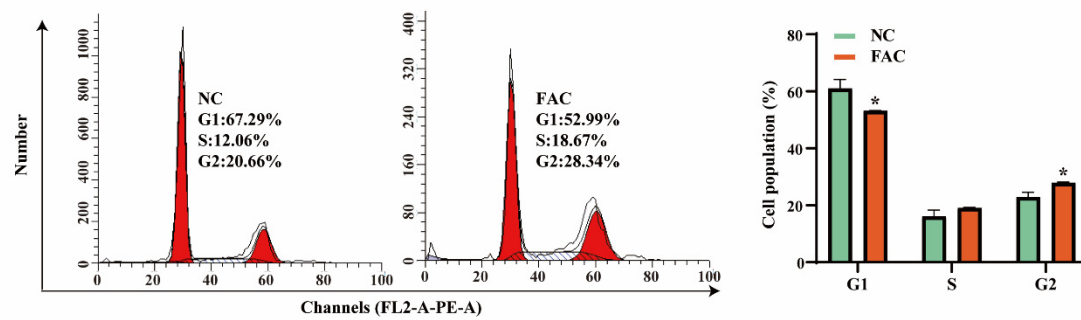


Figure S2. Effects of iron overload on cell cycle in AML12.

The cell cycle distribution in AML12 cells treated with or without FAC was detected by flow cytometry.

Statistical significance was indicated as  $*P < 0.05$ , determined using a two-tailed t-test.