

Supplementary Figure Legends

Figure S1. Genomic distributions and gene ontology of CSB occupancy sites. (A) Total CSB occupancy sites in cells untreated or treated with menadione were analyzed for their genomic distribution. (B) MSigDB pathways analysis of total CSB occupancy sites in cells treated with menadione.

Figure S2. Western blot analysis of CTCF levels in cells used in Figure 3B. Significant reduction in CTCF protein levels were achieved by shRNA treatment in cells without functional CSB (vector) or reconstituted with CSB (CSB).

Figure S3. CSB protein levels in shRNA-expressing cells. Whole cell lysates from cells treated for 5 days with a control shRNA or CTCF shRNA were resolved by SDS-PAGE. Shown are western blots using antibodies that recognize CTCF, CSB and GAPDH.

Figure S4. Antibody supershift assays. (A) EMSA assays were used to visualize supershifts of MBP-CTCF•DNA complexes, in the presence or absence of CSB. The monoclonal anti-MBP antibody was added to reactions as indicated. The anti-MBP antibody recognizes both protein-DNA complexes marked by “•” and “••”, indicating that both protein-DNA complexes contain MBP-CTCF. (B) DNA sequences used in the assays. The CTCF motif is underlined.

Figure S5. CTCF protein levels in CS1AN cells and CS1AN cells reconstituted with CSB. Whole cell lysate from CS1AN cells and CS1AN reconstituted with CSB were resolved by

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SDS-PAGE. Shown are western blot analyses using antibodies that recognize CSB, CTCF and GAPDH.

Supplementary Tables

Table S1: Sequence reads summary of CSB ChIP-seq data

Table S2: CSB occupancy unique to cells treated with menadione

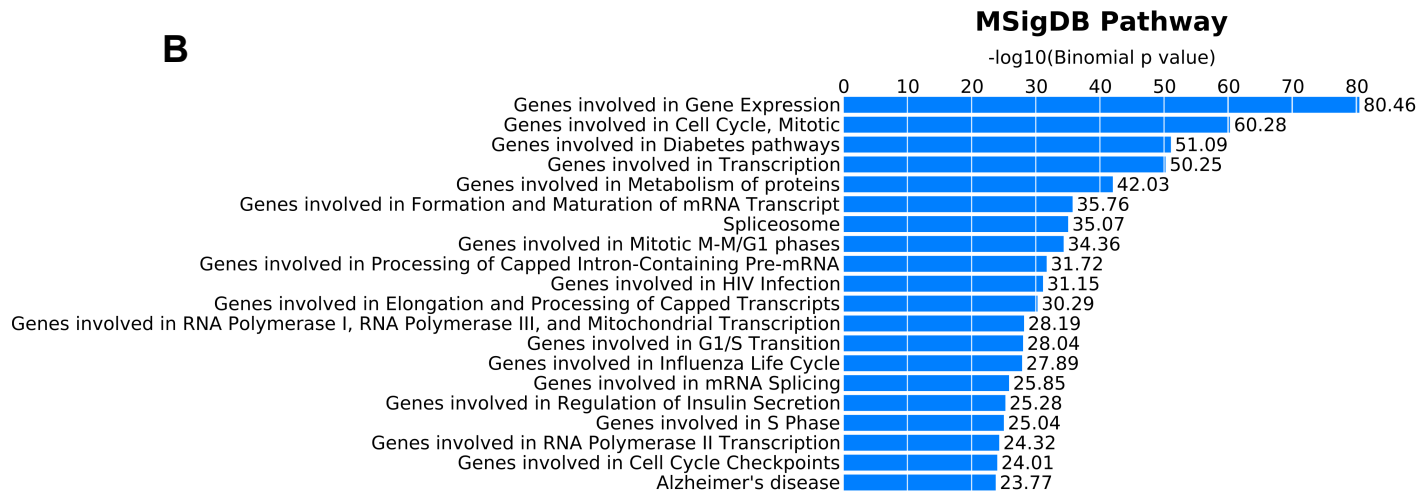
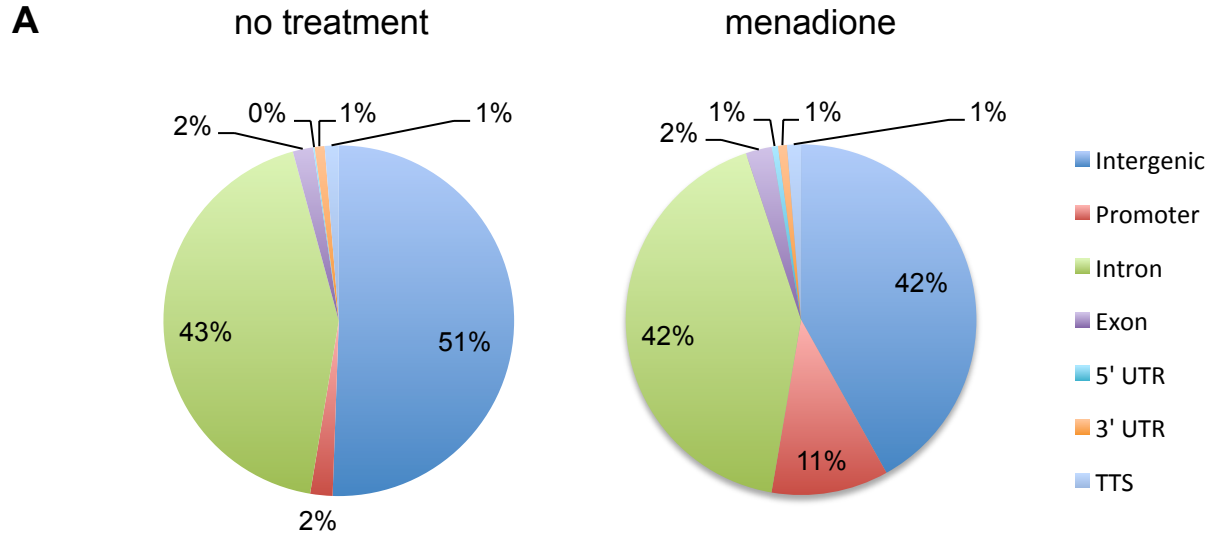
Table S3: CSB occupancy common to cells with or without menadione treatment

Table S4: CSB occupancy unique to cells without menadione treatment

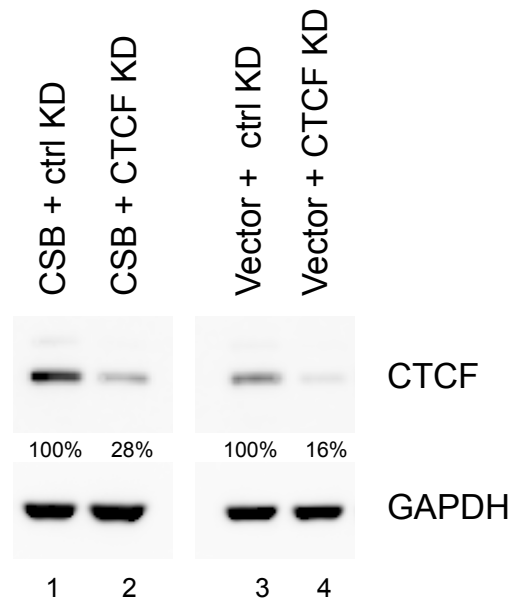
Table S5: KEGG pathway analysis of promoters occupied by CSB upon oxidative stress

Table S6: Enrichment of Jun/AP1 motifs at sites of CSB occupancy

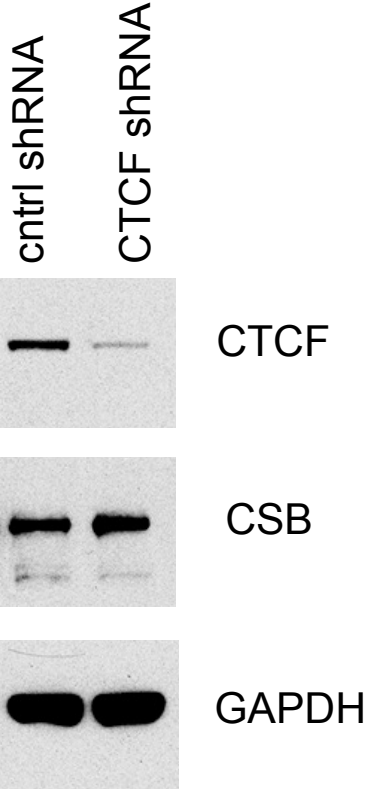
Table S7: Primers used in qPCR assays.



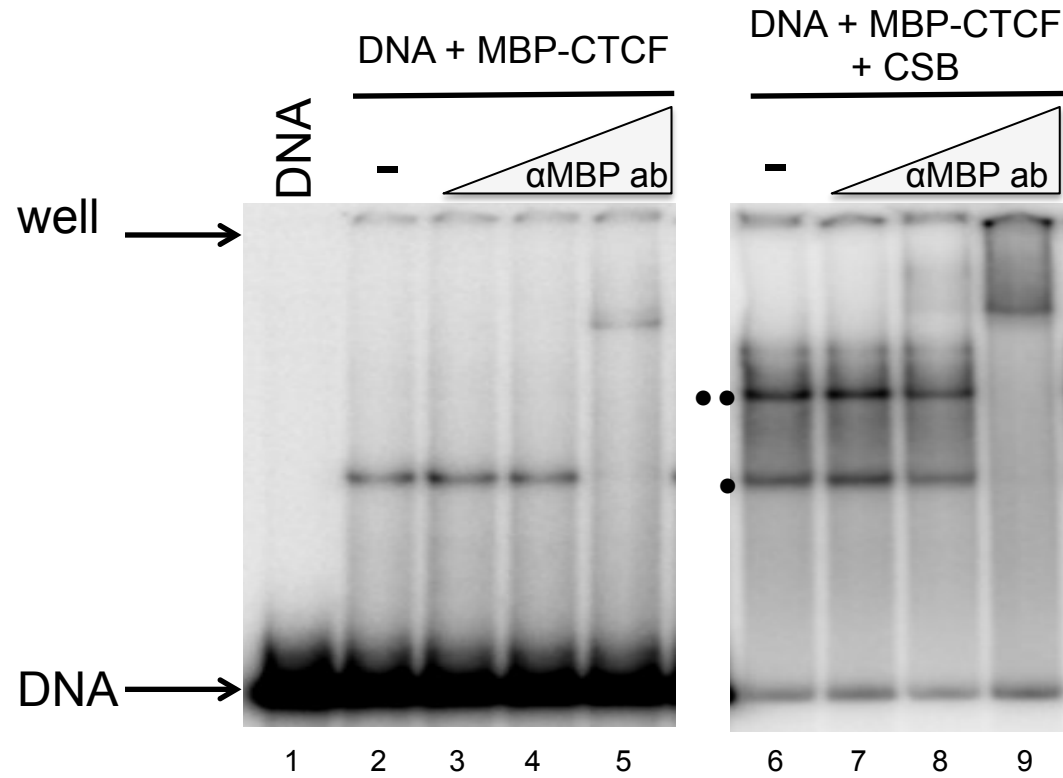
Lake_SFig2



Lake_SFig.3



A



B

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CACACCGAGT TCATCCCTTA TGTGATGGAC CCTCCACGAG GGGGCCCTGG
AGAATCCCGG TGCCGAGGCT GCAGAATTGG TCGTAGACAG CTCTAGCACC
GCTTAAACGC ACGTACGCGC TGTCCCCCGC GTTTTAACCG CCAAGGGGAT
TACTCCCTAG TCTCCAGGCA CGTGTCAGAT ATATACATCC TGT
    
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Lake_SFig.5

