Supplementary Figure Legends

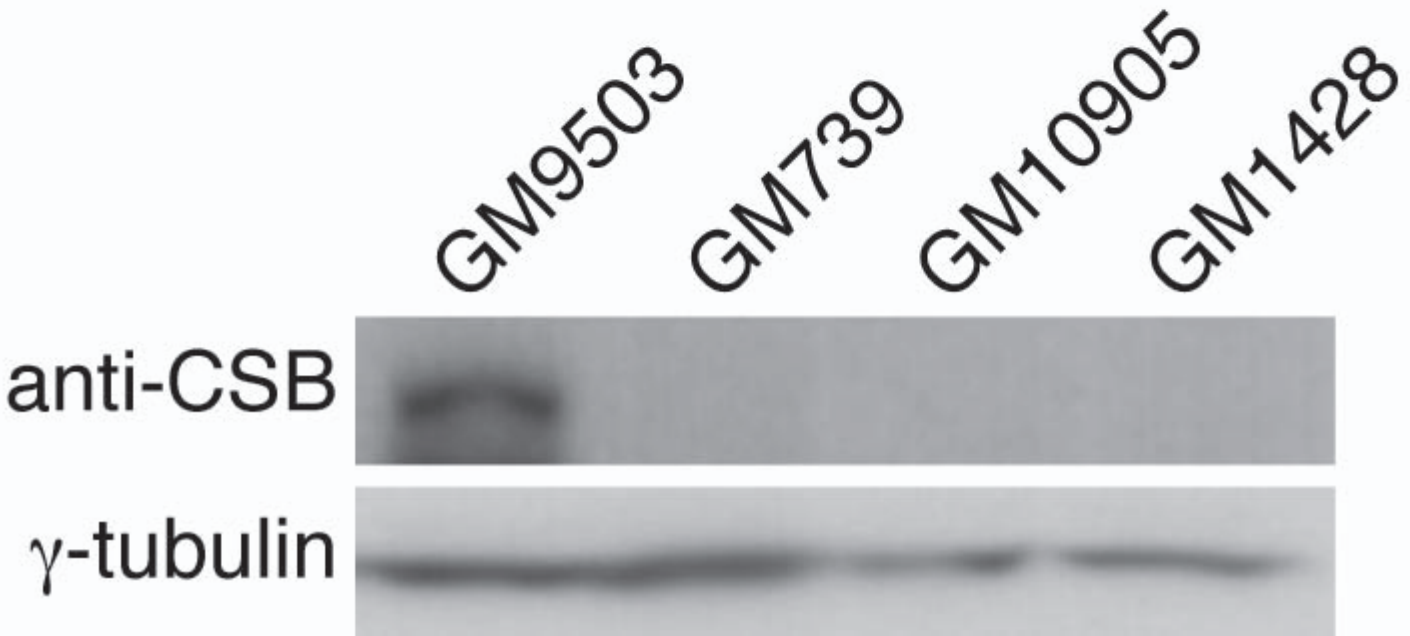
Figure S1. Western analysis of CSB expression in normal and CS primary fibroblasts. Immunoblotting was carried out with anti-CSB or anti-γ-tubulin antibody. The latter was used as a loading control.

Figure S2. (**A**) Analysis of hTERT expression in GM10905 cells. One thousand cells of hTERT-immortalized GM10905 cells were used to measure telomerase activity. TSR8 was used as a positive control whereas 3-[(3-cholamidopropyl)-dimethylammonio]-1-propanesulfonate buffer (CHAPS) was used as a negative control. (**B**) Analysis of metaphase chromosomes from hTERT-GM10905. Chromosomes were stained with DAPI and false colored in red. Telomeric DNA was detected by FISH using a FITC-conjugated $(CCCTAA)_3$-containing PNA probe (green).

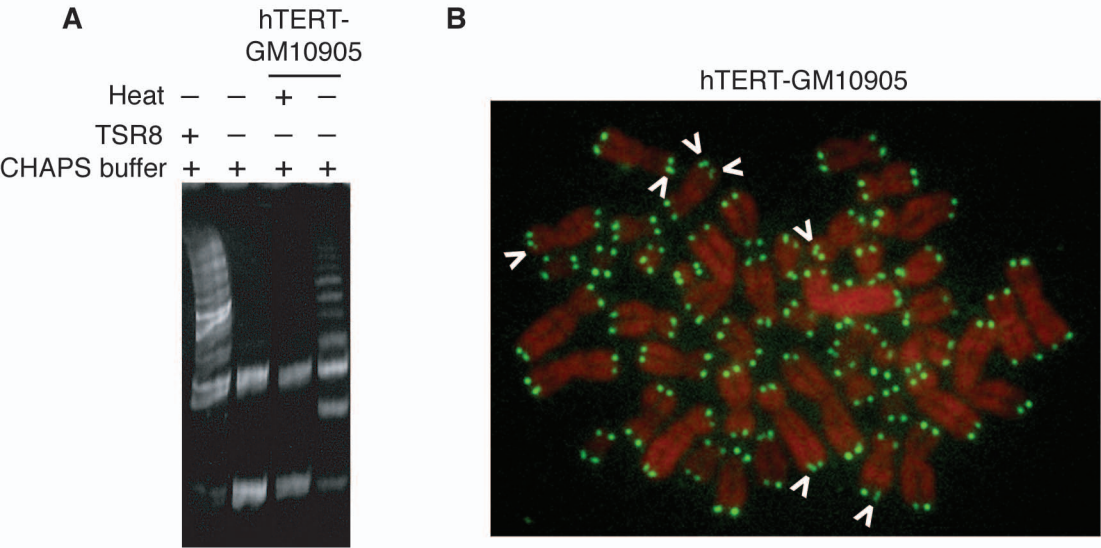
Figure S3. Analysis of metaphase chromosomes from hTERT-GM10905 stably expressing either the vector alone or wild type CSB. Chromosomes were stained with DAPI and false colored in red. Telomeric DNA was detected by FISH using a FITC-conjugated $(CCCTAA)_3$-containing PNA probe (green). Open arrows represent telomere doublets.

Figure S4. Analysis of metaphase chromosomes from HeLaI.2.11 stably expressing either the vector alone or pRS-shCSB. Chromosomes were stained with DAPI and false colored in red. Telomeric DNA was detected by FISH using a FITC-conjugated $(CCCTAA)_3$-containing PNA probe (green). Open arrows represent telomere doublets.

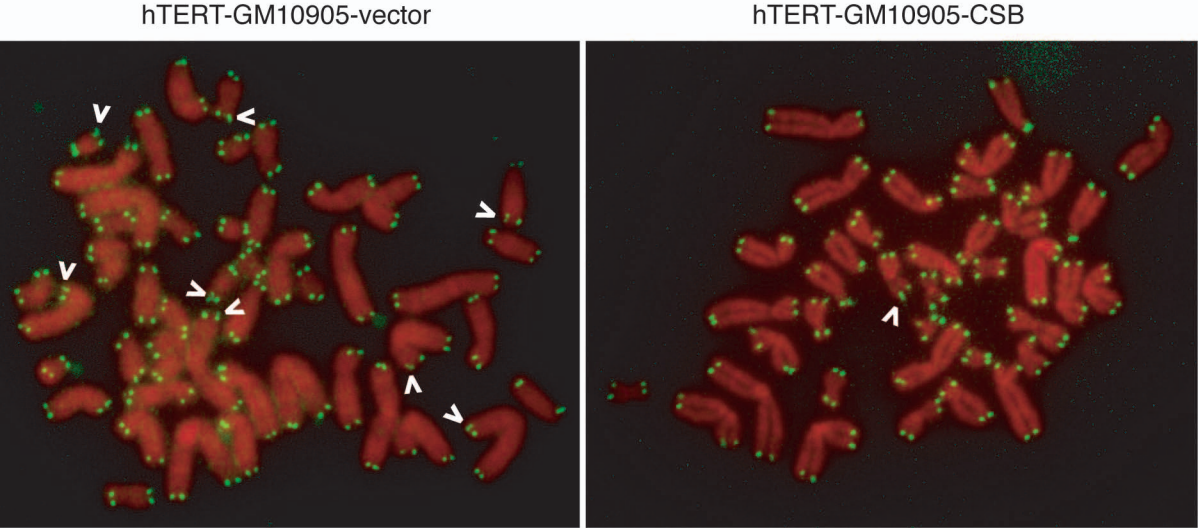
Supplementary Figure S1 Batenburg et al.



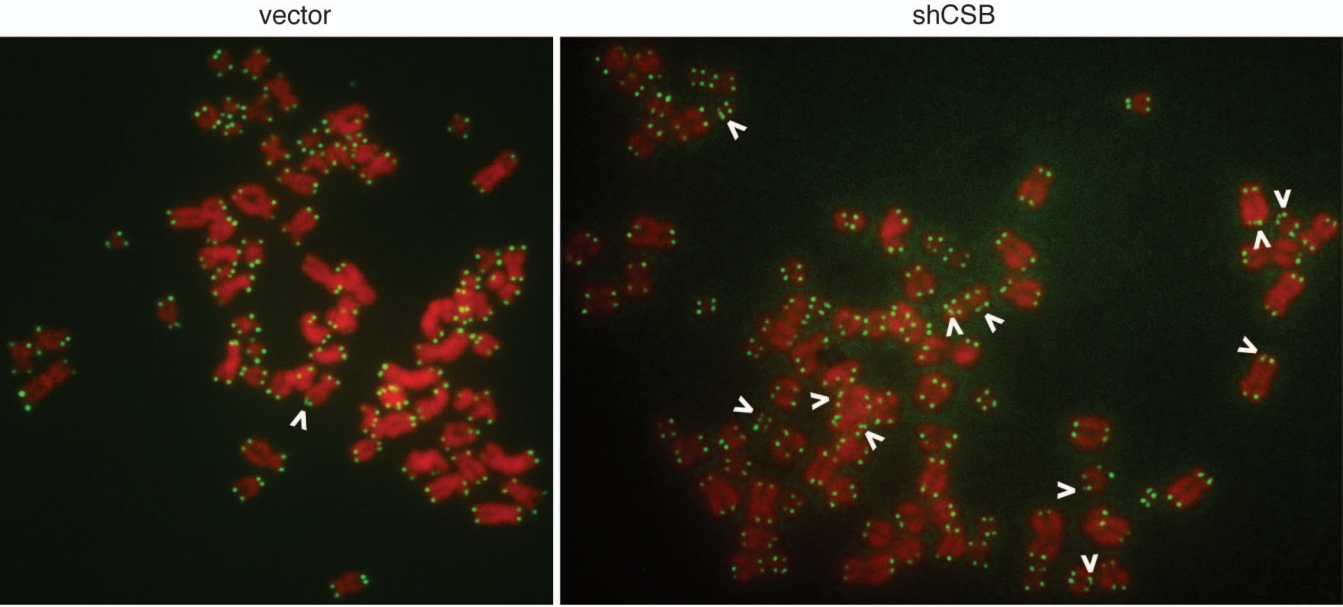
Supplementary Figure S2 Batenburg et al.



Supplementary Figure S3 Batenburg et al.



Supplementary Figure S4 Batenburg et al.



HeLaI.2.11

Supplementary Table S1. Summary of normal and CS primary fibroblast cell lines used.

Cell Line	Age at Biopsy	CSB Allele 1	CSB Allele 2	Source
GM38	9 YR	Normal	Normal	NIGMS
GM9503	10 YR	Normal	Normal	NIGMS
GM8399	19 YR	Normal	Normal	NIGMS
GM10901	42 YR	R735X	Normal	NIGMS
GM10905	10 YR	R735X	R735X	NIGMS
GM739	3 YR	K377X	R857X	NIGMS
GM1428	8 YR	N/A	N/A	NIGMS