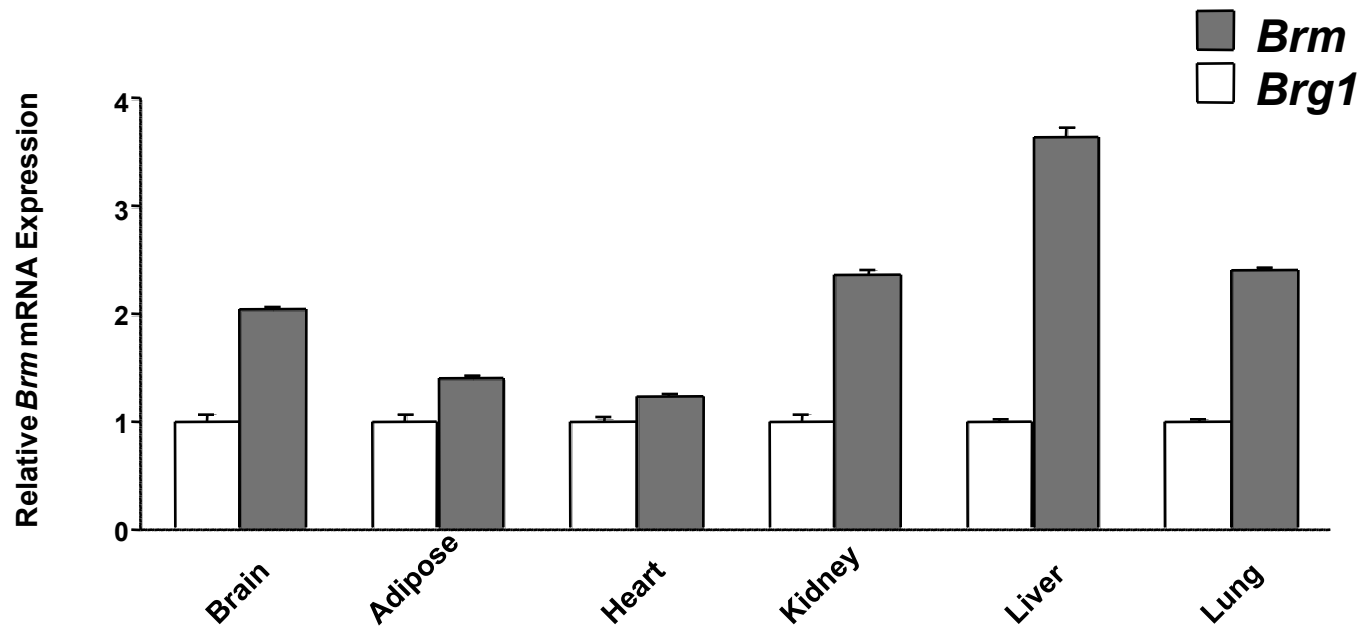
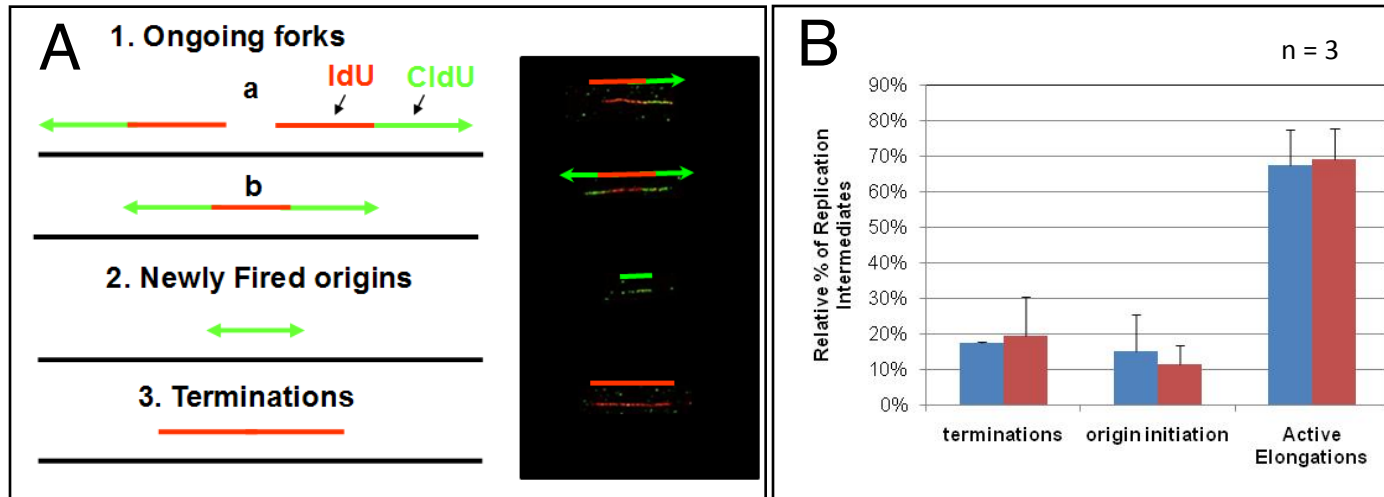


Supplemental Figure 1



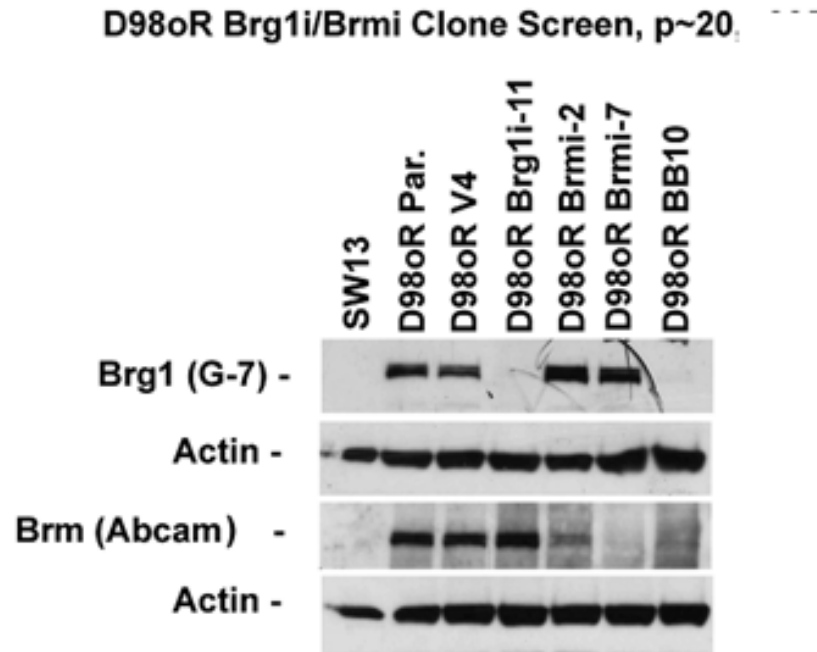
Brg1 and *Brm* expression in adult tissues. RT-qPCR analysis of *Brg1* and *Brm* mRNA levels normalized to *Gapdh* levels in wild-type adult mouse tissues as indicated. Each histogram shows the expression of *Brm* relative to *Brg1* (mean \pm SE for three technical replicates).

Supplemental Figure 2



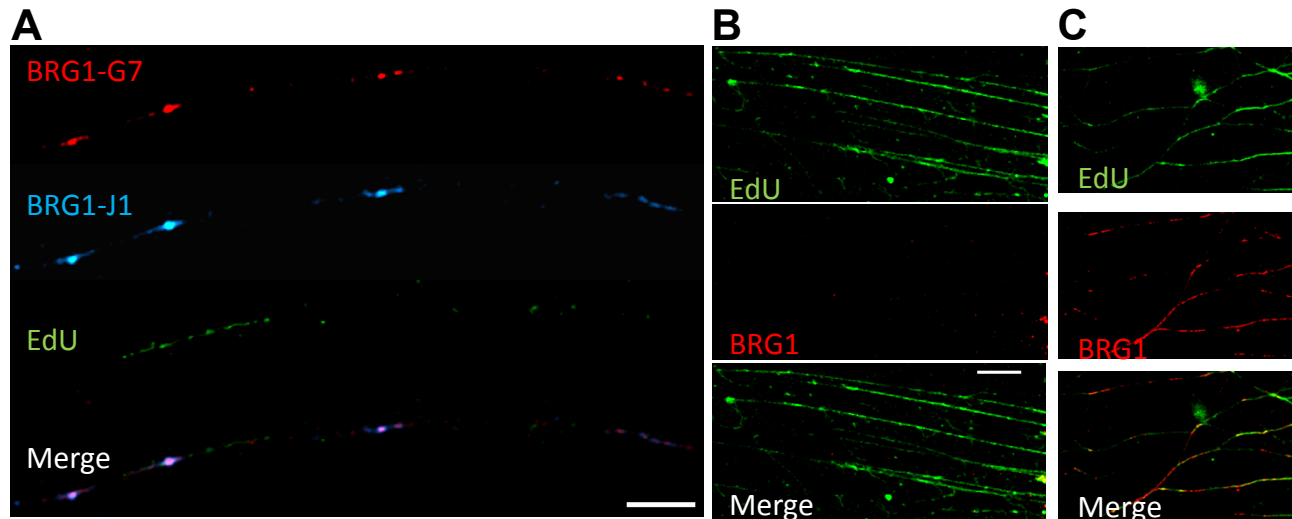
(A) Illustration of the criteria used to analyze active replication units labeled with (IdU) and (CldU). **(B)** Distribution of replication intermediates in wild-type (WT, blue bars) and mutant (Mut, red bars) DNA fibers. Replication tracks from three different fetal livers were analyzed. Error bars in B represent standard deviation.

Supplemental Figure 3



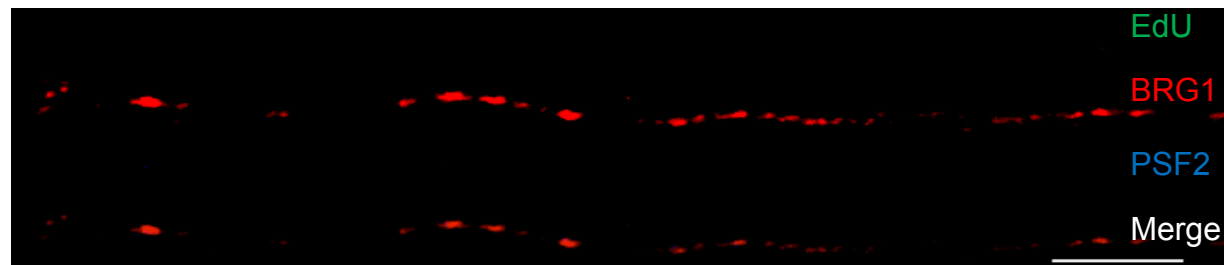
Western blot analysis of BRG1 and BRM in D98OR knockdown cells. Shown are western blot panels of BRG1 (top), BRM (middle), and actin (bottom) as a control. The first lane is SW13 cells which are deficient for BRG1 and BRM and serves as negative control. Parental D98OR HeLa cells are in lane 2, while double knockdown cells are in the final lane (lane 7). Cells knocked down for only BRG1 (lane 4) or BRM (lanes 5, 6) are also shown but were not used in this study.

Supplemental Figure 4



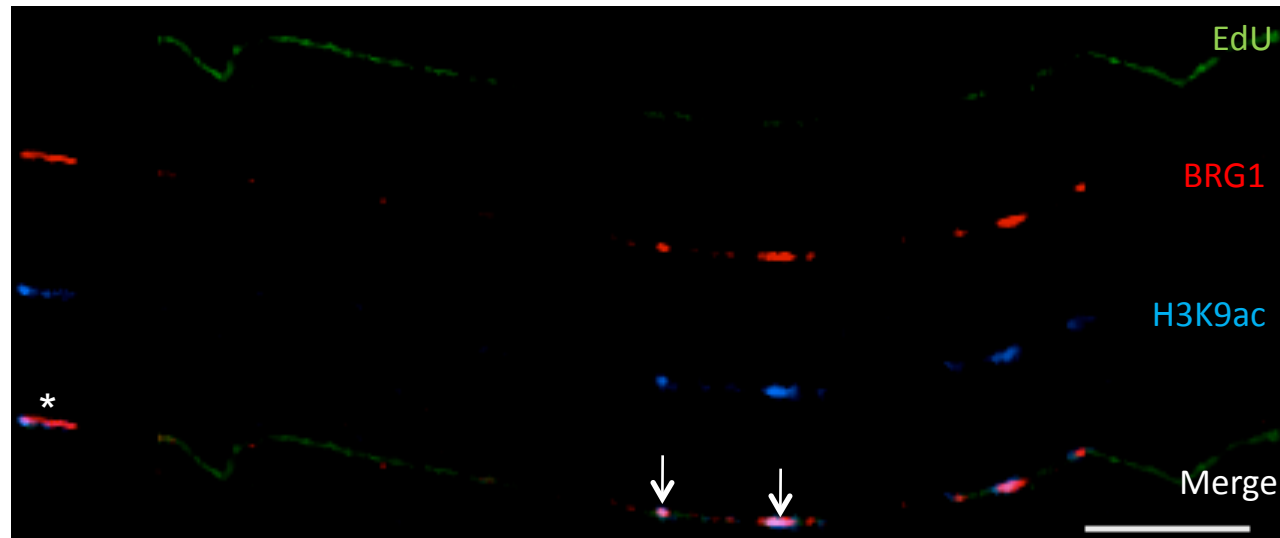
Control studies for BRG1 staining on extended chromatin fibers. NHF1 cells were incubated with EdU for 40 min prior to collection. (A) Distribution of BRG1 on extended chromatin fibers. Two different antibodies were used to verify the distribution of BRG1 on chromatin fibers: BRG1-G7 (red label) and BRG1-J1 (blue label). There is a high degree of overlap of the two antibodies. (B and C) Chromatin fibers from BRG1 negative and BRG1 positive cells. SW13 (BRG1 negative) and NHF1 (BRG1 positive) cells were incubated with the nucleotide analog EdU for 40 min prior to collection for chromatin fiber preparation. (B) Fibers from SW13 cells are labeled with EdU (green) but no BRG1 (red) is visible. (C) In fibers from NHF1 cells, both EdU and BRG1 signal can be seen. Bar ~25 μ m (~400 kb).

Supplemental Figure 5



Distribution of BRG1, PSF2, and EdU on an extended chromatin fiber. In this fiber, BRG1 signal is seen (red), but no signal from PSF2 or EdU is present. The BRG1 that is present on this fiber is probably not involved the process of DNA replication but instead involved in transcriptional regulation. Bars $\sim 25 \mu\text{m}$ ($\sim 400 \text{ kb}$; bottom left of each panel).

Supplemental Figure 6



Distribution of BRG1, H3K9ac, and EdU on extended chromatin fibers. We previously demonstrated with a pan-H3 antibody that H3 was distributed along the entire length of extended chromatin fibers (Cohen et al., 2009). Here, we show that, as expected, acetylated H3 (blue signal) is found only at selected sites on the fiber. For example, H3K9ac co-localizes with BRG1 (red signal) at some sites of active replication (green signal, EdU). Two sites are indicated by arrows. H3K9ac was also found with BRG1 at sites that are not actively replicating (asterisk). Bar $\sim 25 \mu\text{m}$ ($\sim 400 \text{ kb}$; bottom right of panel).