Original gel image for Fig S2.

20% PAGE gel run in 0.5x TBE buffer. Stained 15 min with SYBR Gold (diluted 1:50,000 in the TBE running buffer). Gel imaged on a Typhoon (GE Amersham) with excitation at 488 nm (Cy2 525BP20 filter) and exported as .tif. Excess brightness reduced with ImageJ.

Digest reactions (lanes 2-11 below) were E.~coli DHB4 genomic DNA digested with MspJI (New England Biolabs) in 40  $\mu$ L 1x CutSmart buffer plus 0.525  $\mu$ M enzyme activator, 37°C 3 hrs. See text for description of the activators.

## Sample lanes:

- 1. Low Molecular Weight DNA Ladder (New England Biolabs #N3233).
- 2. 3 µg gDNA, no activator.
- 3. 3 µg gDNA, unmodified activator.
- 4. 3 μg gDNA, 5'-amino modified activator.
- 5. 3 μg gDNA, internal T>U modified activator.
- 6. 3 µg gDNA, both 5'-amino and internal T>U modified activator.
- 7. 1.5 μg gDNA, no activator.
- 8. 1.5 µg gDNA, unmodified activator.
- 9. 1.5 μg gDNA, 5'-amino modified activator.
- 10. 1.5 μg gDNA, internal T>U modified activator.
- 11. 1.5 µg gDNA, both 5'-amino and internal T>U modified activator.
- 12. Low Molecular Weight DNA Ladder (New England Biolabs #N3233).

