



**Figure S4** Validation of sonication efficiency. Embryos were fixed and homogenized in ChIP lysis buffer. Samples were sonicated at 15% amplitude for 0.9s for 0, 1, 2, 4 or 9 cycles. DNA was purified and amplification of a 2kb fragment by PCR using the following primers 5'CGAGAATGCGCAATACAATG 3'GTGCAACTGACGGAGGAAGT was attempted. After 4 sonication cycles, very little product was amplified, and after 9, the number used in our usual ChIP protocol, essentially no amplified product was detected.