

A

3' R Sequence:

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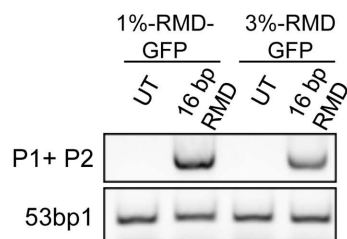
RMD-GFP 1>CCTGGTGATGTCGGACCTGTTCCGCACAGGAGCAAAGTGTGCCGTTGTCTCTTCGGTCCCGTGGACAGTGAGCAGTTGCGCCGTGATTGCGATGCGCTCA>100
1% 1>CCTGGTGATGTCGGACCTGTTCCGCACAGGAGCAAAGTGTGCCGTTGTCTCTTCGGTCCCGTGGACAGTGAAGCAGTTGCGCCGTGATTGCGATGCGCTCA>100
3% 1>CCTGGTGATGTCGGACCTGTTCCGCACAGGAGCAAAGTGTGCCGTTGTCTCTTCGGTCCCGTGGACAGTGAAGTGAAGCAGTTGCGCCGTGATTGCGATGCGCTCA>100

101>TGGCGGGCTGTCTCCAGGAGGCCCGAGAACGGTGGAACTTTGACTTCGTACCGAGAGCGCCGCTGGAGGGCAACTTCGTCTGGGAGCGCGTTCCGGAGCCT>200
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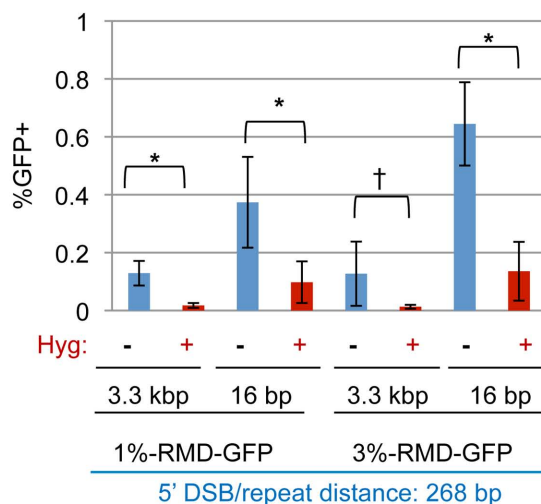
201>AGGGCTGCCCAAGGTCTACCTGAGCCCTGGGTCCCGCAGCCGTGACGACCTGGGAGGGGACAAGAGGCCCAGTACTTCCTCTGCCCT>287
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201>AGGGCTGCCCAAGGTCTACCTGAGCCCTGGGTCCCGCAGCCGTGACGACCTGGGAGGGGACAAGAGGCCCAGTACTTCCTCTGCCCT>287

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B



C



**Figure S5.** Validation of RMD-GFP reporters with divergent repeats. **(A)** Sequence of the 287 bp 3' repeat (R) in the RMD-GFP, 1%-RMD-GFP (1%), and 3%-RMD-GFP (3%) reporters. **(B)** Shown are PCR amplification products to confirm the *Cdkn1A*-GFP fusion gene in GFP+ cells from 1%-RMD-GFP and 3%-RMD-GFP WT mESCs, using the primers shown in Fig. 1A. **(C)** GFP+ cells from 1%-RMD-GFP and 3%-RMD-GFP WT mESCs are sensitive to *hyg* treatment. Shown is the frequency of GFP+ cells normalized to transfection efficiency for 1%-RMD-GFP and 3%-RMD-GFP WT cells cultured without (blue bars) or with (red bars) hygromycin, using the protocol shown in Fig. S1A. N= 9. Error bars represent s.d. \* $P \leq 0.0029$  and † $P = 0.0304$  for indicated comparisons using an Unpaired *t*-test with the Holm-Sidak correction.