

Description of additional supplementary files

Supplementary Movie 1. Time-lapse of C2C12 cells co-transfected with mRFP-PCNA and GFPTet1s imaged live 8 hours post-transfection in 20 minute time intervals. Scale bar = 5 μ m.

Supplementary Movie 2. Time-lapse of C2C12 cells co-transfected with mRFP-PCNA and GFPTet1 imaged live 8 hours post transfection in 20 minute time intervals. Scale bar = 5 μ m.

Supplementary Data 1. Plot statistics for main and supplementary figures.

n: number of cells of all replicates (if not stated otherwise); StDev: standard deviation; 95% CI: 95 %

confidence interval; p-value: calculated as stated in figure legends and material and methods section. n.s., not significant, is given for p-values \geq 0.05; one star (*) is given for p-values

$<$ 0.05 and \geq 0.005; two stars (**) is given for values $<$ 0.005 and \geq 0.0005; three stars (***) is given for values $<$ 0.0005. P-values from independent two-group comparison are

shown in the table followed by the numbers assigned to each group in brackets. For example, in Figure S5D, 0.0002057 is the p-value obtained after the comparison (1-2), 1 GFP and 2 Tet1s.

Supplementary Data 2. Mass spectrometry quantification of DNA modifications in genomic DNA.

Summary of the experimental conditions, the data and analysis is provided in the individual spreadsheets. Concentrations of DNA modifications were calculated using integrated values from ion chromatogram peaks.