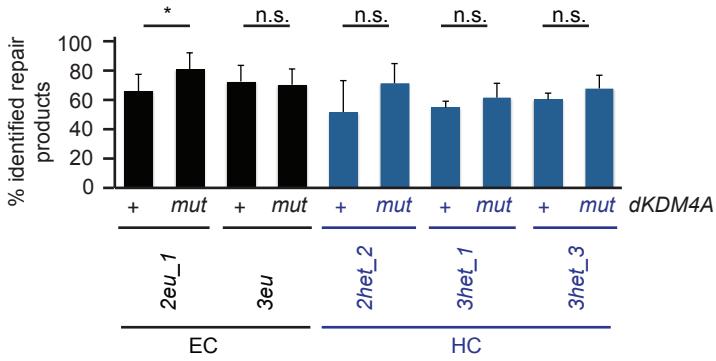
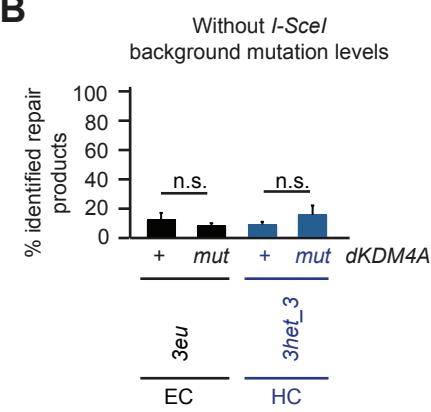


Supplemental figure 5

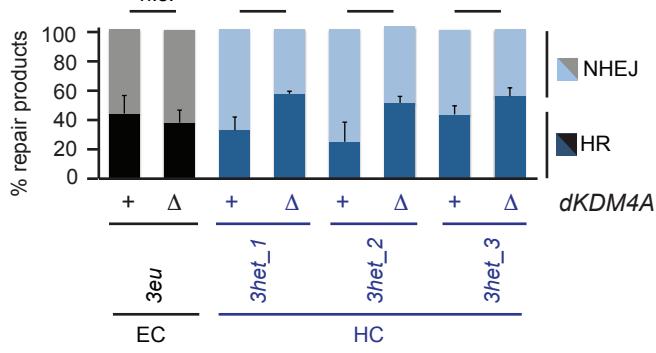
A



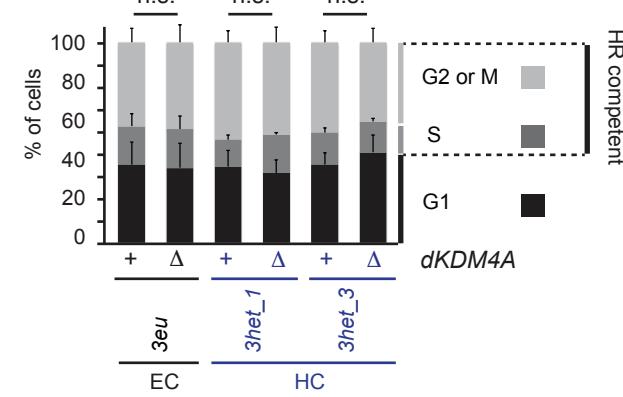
B



C



D



E

Colmenares et al., Dev. Cell, 2017
Drosophila cells

Crona et al., Dev. Biol., 2013
Drosophila animals

	FoldChange (dKDM4A RNAi vs control RNAi)	padj	FoldChange in 1st instar (deletion/insertion vs WT)	padj
<i>mu2</i>	0.990277695330394	0.997879	1.04340742146436	0.999034
<i>spnA</i>	1.05421043673324	0.997879	0.969202680544619	0.999034
<i>CtIP</i>	0.974959516625972	0.997879	0.985430069528658	0.999034
<i>tosca</i>	1.00821463400451	0.997879	1.00344337032336	0.999034
<i>Blm</i>	0.926381405058853	0.997879	0.943003283873478	0.999034
<i>Irbp</i>	1.03863841432886	0.997879	0.9838109379101	0.999034
<i>Ku80</i>	1.04410785633905	0.997879	0.875328712750564	0.999034
<i>lig4</i>	1.08838871263183	0.997879	0.770517003983855	0.593783

Supplemental figure 5.

A) Quantification of the percentage of total identified repair products (indels + HR) in the DR-white PCR products using the TIDE-algorithm. Averages + STDEV are shown of $n \geq 5$ DR-white/I-SceI larvae per condition. n.s. = p-value ≥ 0.05 , * = p-value < 0.05 , ** = p-value < 0.01 (t-test, unpaired). B) Quantification of the percentage of identified background mutations in the DR-white PCR products using the TIDE-algorithm in control wild type and dKDM4A mutant larvae without I-SceI transgene expression. Averages + STDEV are shown of $n = 3$ DR-white larvae per condition. n.s. = p-value ≥ 0.05 , * = p-value < 0.05 , ** = p-value < 0.01 (t-test, unpaired). C) TIDE algorithm-dependent extraction of the percentage of HR products (dark colored bars) and insertions and deletions (NHEJ) (light colored bars) from the total pool of DR-white repair products identified using Sanger Sequencing. PCR was performed on genomic DNA from larvae with indicated DR-white insertions in the presence or absence of the dKDM4A homozygous mutation. $n \geq 3$ DR-white/I-SceI larvae per condition + STDEV. n.s. = p-value ≥ 0.05 , * = p-value < 0.05 , ** = p-value < 0.01 (t-test, unpaired). D) Cell cycle analysis using FUCCI expressing larval tissue with indicated genotypes. Cell cycle phase of individual cells was determined based on expression of mRFP1-CycB1-266 or GFP-E2F-230; G2 or mitotic cells (G2 or M, RFP + GFP positive), S phase (S, RFP positive, GFP negative) and G1 phase (G1, RFP negative, GFP positive). n.s. = p-value ≥ 0.05 , * = p-value < 0.05 , ** = p-value < 0.01 (t-test, unpaired). Averages + STDEV are plotted for $n = 3$ tissues/condition with ≥ 99 cells/tissue. E) Relative changes in mRNA levels of indicated repair genes in dKDM4A depleted cells (Colmenares et al., Dev. Cell, 2017) and dKDM4A mutant flies (Crona et al., Dev. Biol., 2013).