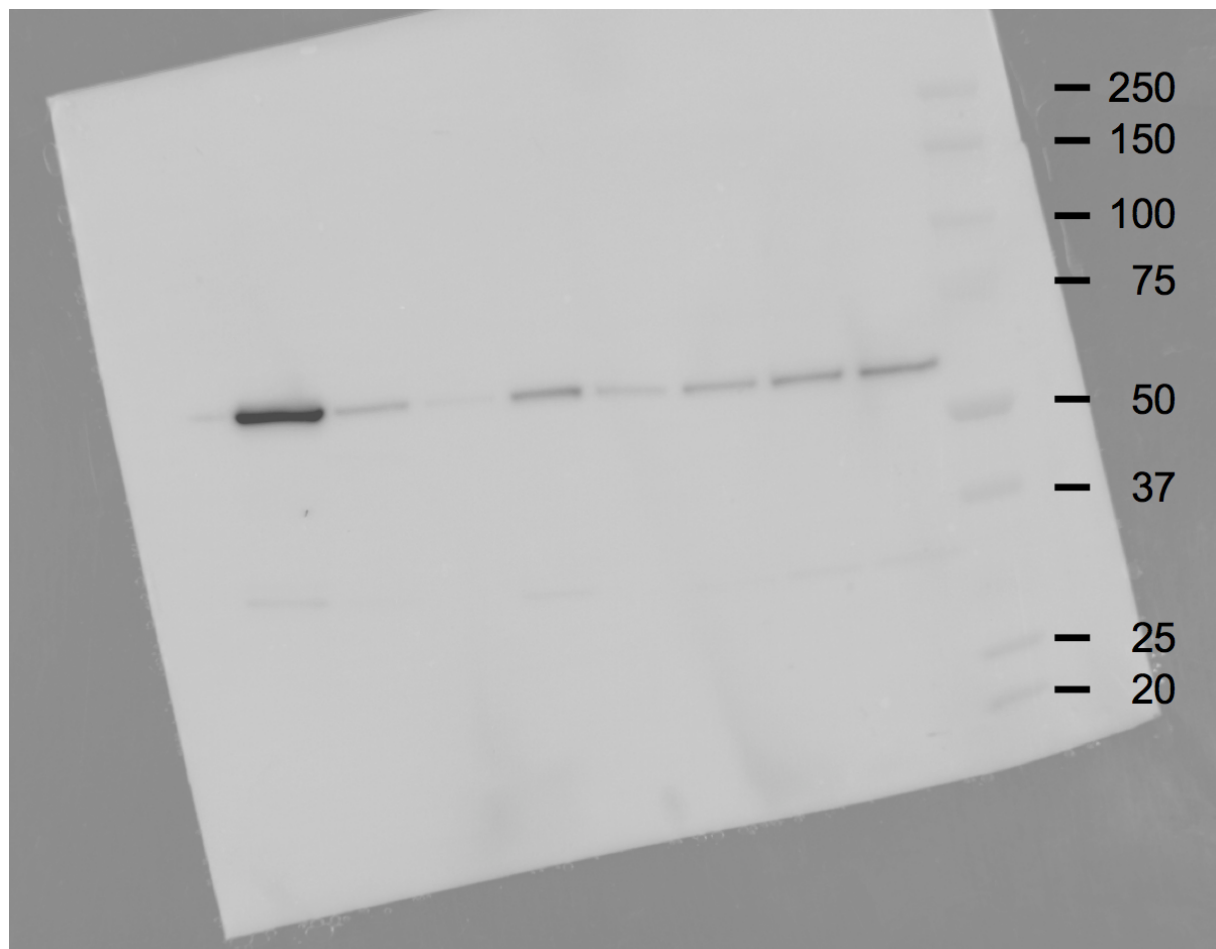
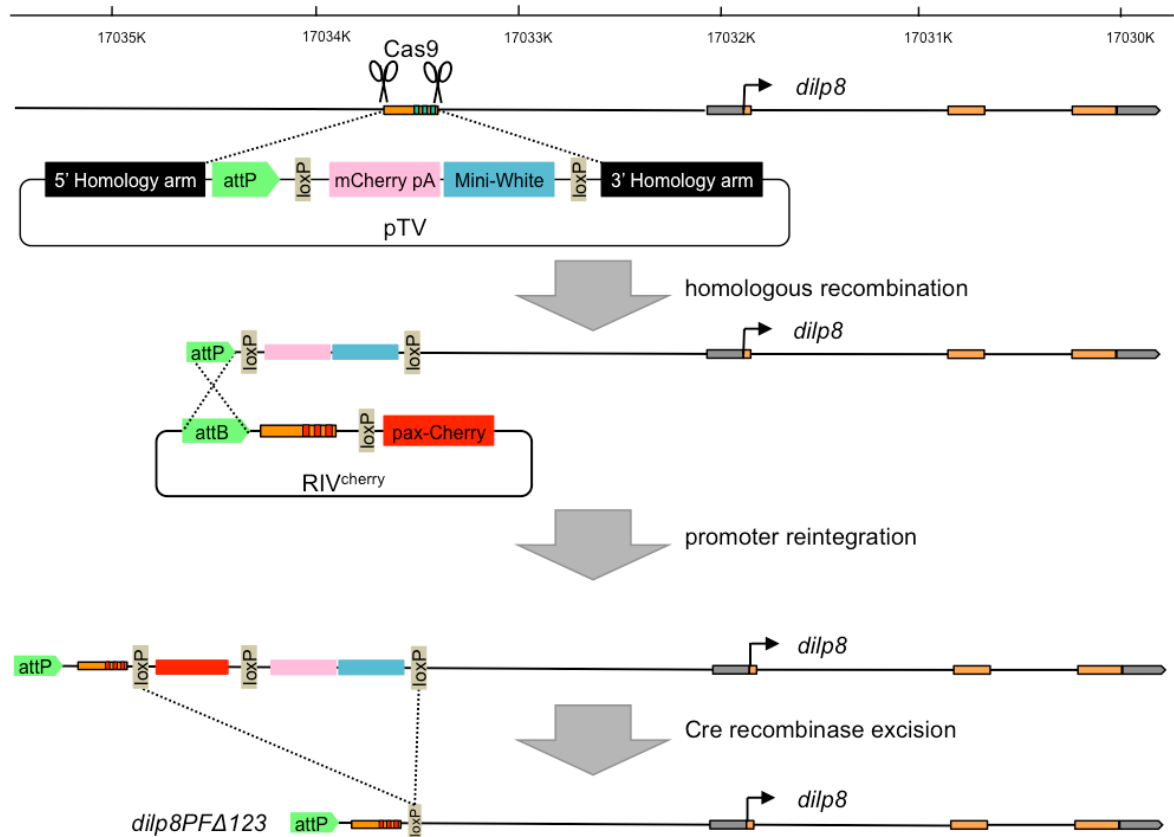




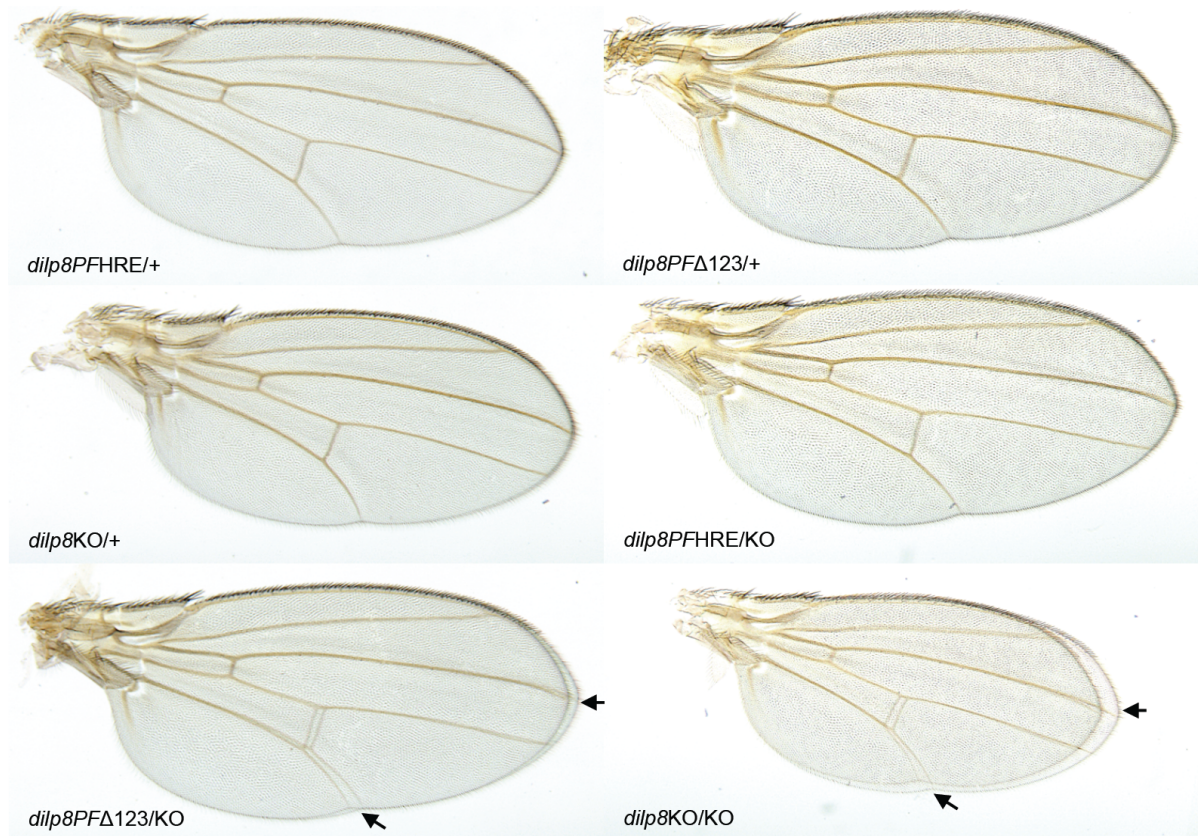
Supplementary Figure 1. Original image of a DNA pull-down experiment showing the result of anti-Flag western blotting revealing the presence of a 60KDa Flag-Scalloped band (see methods).



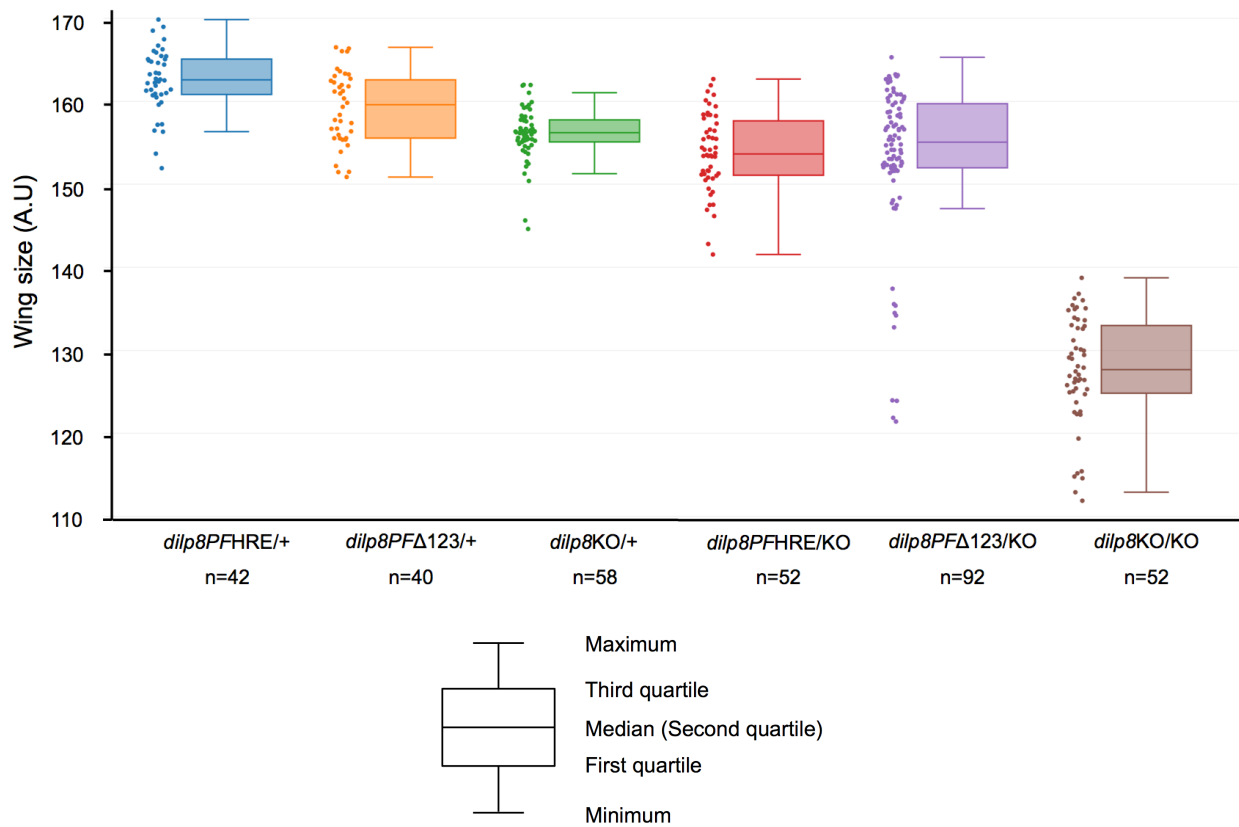
Supplementary Figure 2. *dilp8* editing by accelerated homologous recombination. Schematics illustrating the different steps employed to edit the *dilp8* promoter. The editing allows replacing a 600bp promoter fragment (PF) containing the three Sd-binding sites (orange segment with 3 green dots in between scissors) with a mutant PF containing modified Sd-binding sites (PF Δ 123). The same procedure was also used to re-insert the wt promoter fragment (PFHRE) as a control. For a detailed description see Methods.

Dilp8-PF 17034117 AGGTTGTGAAATTGTATTTATGAATGAGAGTGCCCGTGGCGAACCAATTAATGCCGCATA
 |||
 Dilp8-PFΔ123 AGGTTGTGAAATTGTATTTATGAATGAGAGTGCCCGTGGCGAACCAATTAATGCCGCATA
 |||
 CCAGCAAGAGTTCCACCGAACCACAACGGCCAGCGCACACATTCCGAACCCAAGTCGGTG
 |||
 CCAGCAAGAGTTCCACCGTACCACAACGGCCAGCGCACAGGATCCGAACCCAAGTCGGTG
 |||
 TTCCCAGAACGTGCCCGTTACCGTTATGCGTTGCCGATCGGATCGACGAGCGCGAGAATG
 |||
 TTCCCAGAACGTGCCCGTTACCGTTATGCGTTGCCGATCGGATCGACGAGCGCGAGAATG
 |||
 CACATTCCGAAGGATACGTGCGAAATGCGGGAGAAAATGCAACTGCGCAGCAGCATTGCG
 |||
 CACATGAAGAAGGATACGTGCGAAATGCGGGAGAAAATGCAACTGCGCGGCAGCATTGCG
 |||
 CATACGCCACGAGGGCCGGCTAACATTTCCGCATGCGGGAATGCAACGAAAGCGAAAAGC
 |||
 CATACGCCACGAGGGCCGGCTAACATTTCCGCATGCGTTCATGCAACGAAAGCGAAAAGC
 |||
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 |||
 AAGTGGCAAAAAAAGAAAACAGCATAACCAAAACGAATGTGGAAACGAAACCGAAACC
 |||
 AAATCCGAACCGAATCGGAATCGGAATCAGAAACGTAACAATCTGAACCCATAAAAAGTC
 |||
 AAATCCGAATCGAATCGGAATCGGAATCAGAAACGTAACAATCTGAACCCATAAAAAGTC
 |||
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 GGCCGAAAGTGTGCATTGACCGAGAGAGCGGCTAAAAATATCCGAAAAAGAACGTAACAC
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 |||
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 TGCTCCACCCCAAATGATGCTGCAACAGGGTGAGCGAAAGAGAGGGCGAGCCCGATACCG
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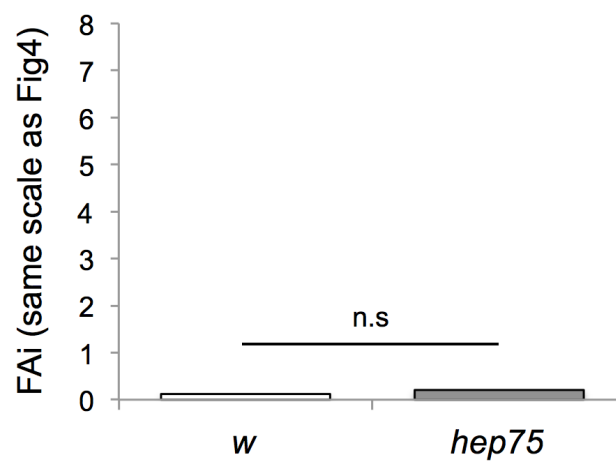
Supplementary Figure 3. Modification of the HRE of the *dilp8* locus by gene-editing. Sequence analysis of DNA extracted from homozygous *dilp8-PFΔ123* mutants flies showing the mutations introduced by gene editing to abolish the three putative Sd-binding sites in the HRE of the *dilp8* locus (see Methods and Supplementary Fig. 1).



Supplementary Figure 4. Mutations in the HRE of the *dilp8* promoter induce fluctuating asymmetry. Representative pictures of overlays of left and right wings from individuals of the indicated genotypes are shown. The reduced size of *dilp8KO/KO* wings is not observed in *dilp8KO/def* mutant animals, suggesting that it is due to a secondary mutation.



Supplementary Figure 5. Box-plot showing the distribution of wing sizes in populations of the indicated genotypes (using Plotly <https://plot.ly/>).



Supplementary Figure 6. Fluctuating asymmetry index measured on male individuals from *w*¹¹¹⁸ or *hep*⁷⁵ mutant background. FA index scale is as shown in Figure 4.