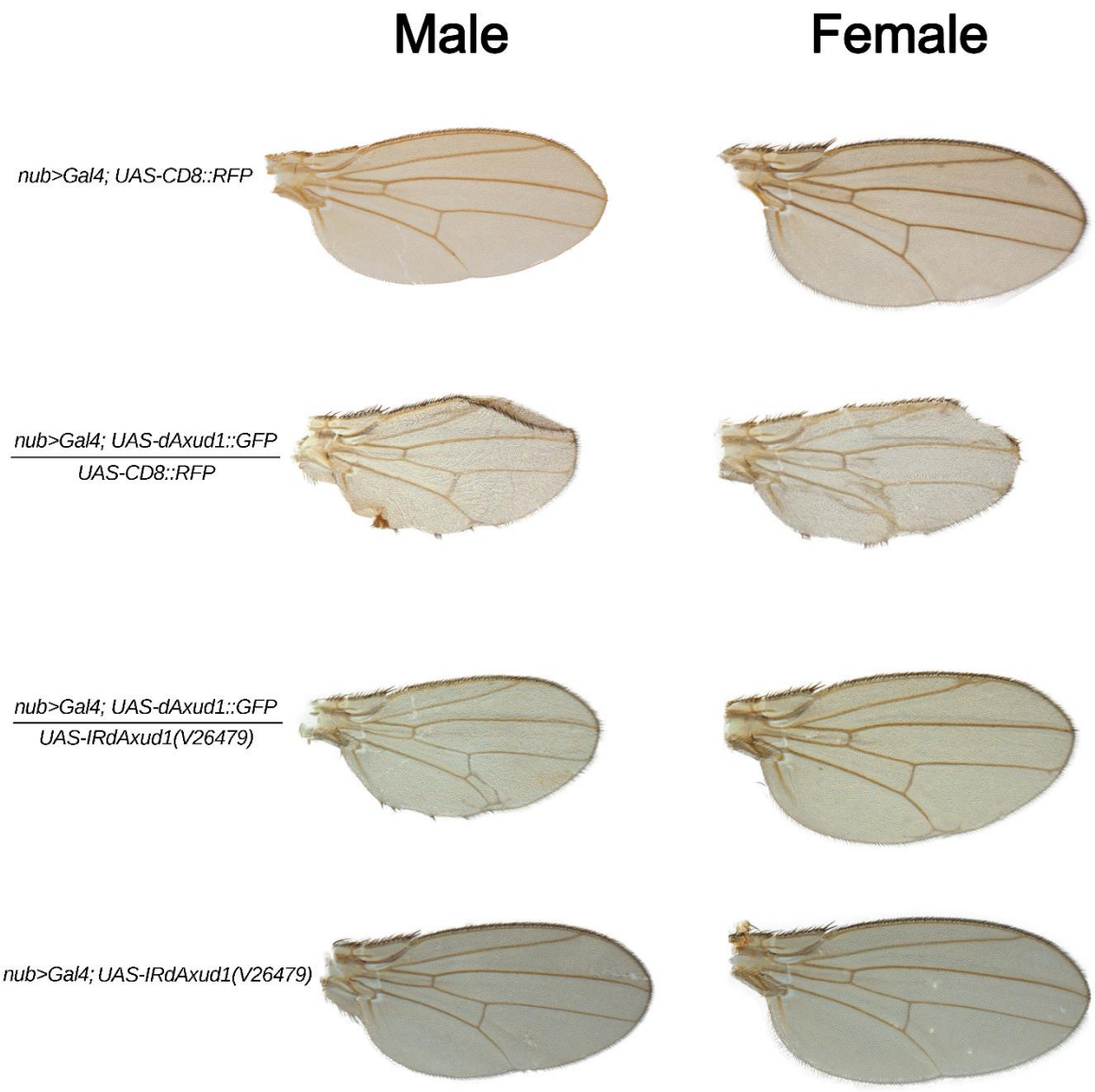
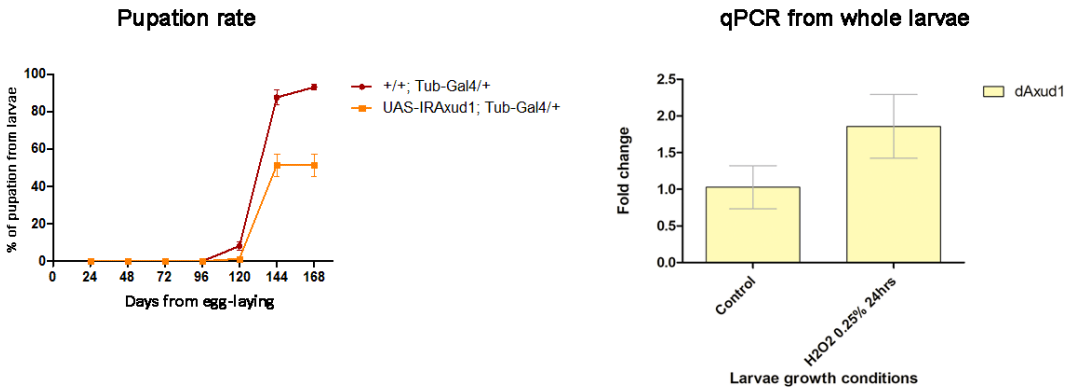
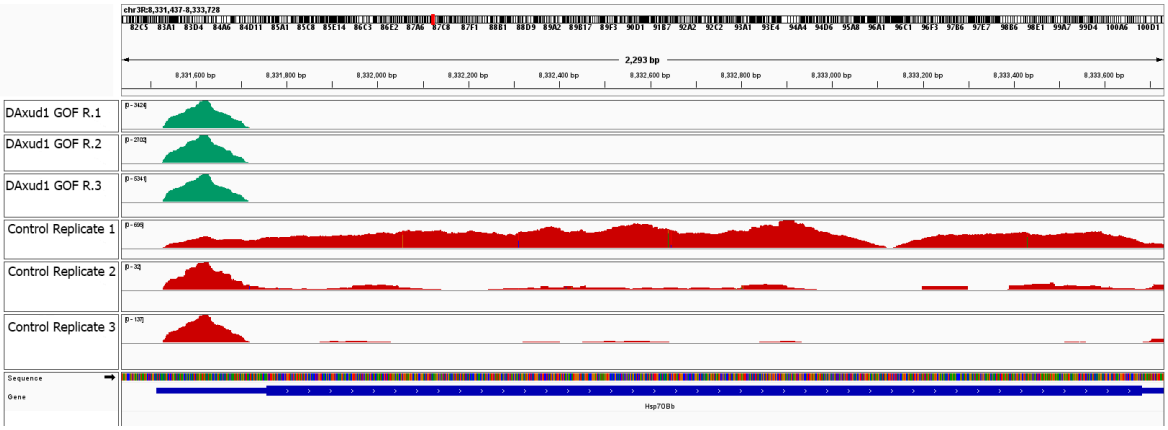


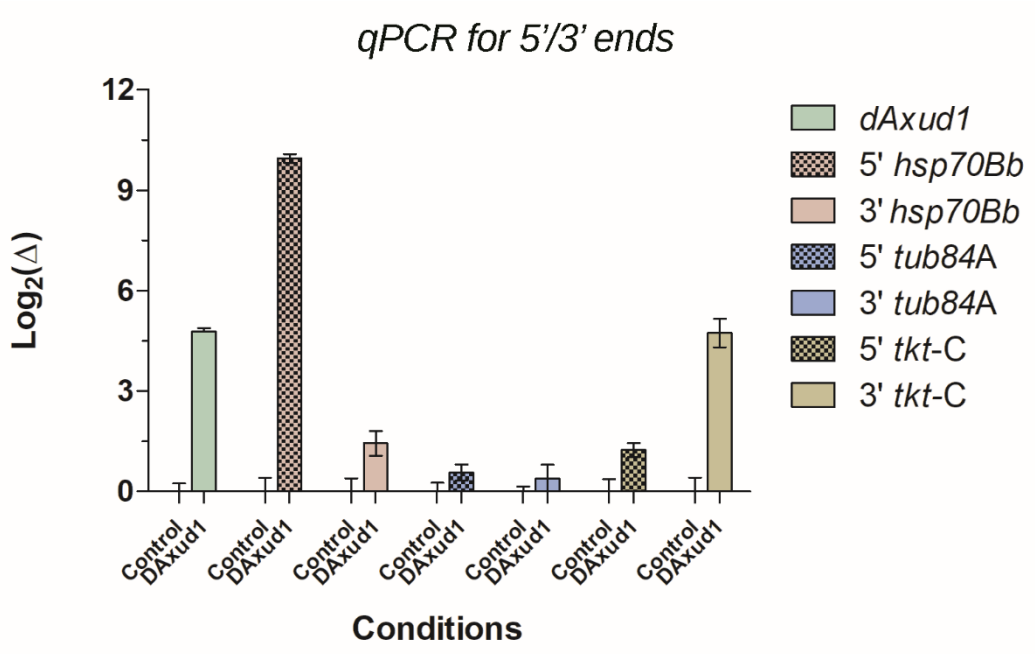
Additional Figure S1. Phenotype analysis of knockdown of *dAxud1* RNAi. Co-expression of *IR-dAxud1* can reverse the phenotype of overexpression of *dAxud1* and there is no evident phenotype on *dAxud1* RNA knockdown. Flies were grown at 29°C.



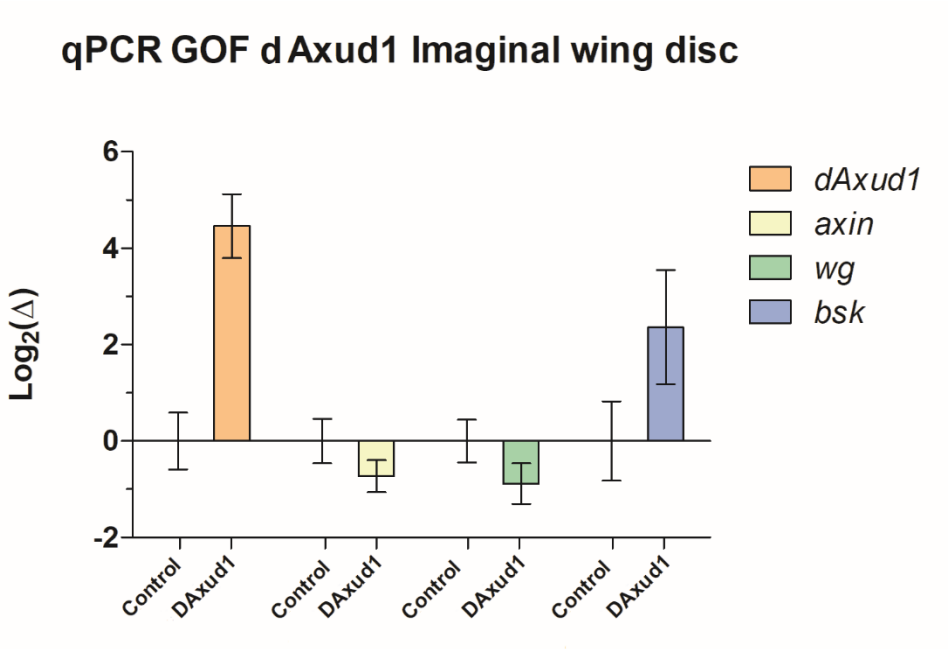
Additional Figure S2. *dAxud1* RNA knockdown has a peroxide-sensitive phenotype in pupation rate, and *dAxud1* rises its mRNA levels at 24 hours on larvae feed with peroxide food 0.5% supplement. The RNA was extracted from larvae on 72-96 hours after egg-laying. P-value = 0.02 from t-test. qPCR was normalized with *actin42C*.



Additional Figure S3: Imaginal wing discs RNA-seq alignment from count profiles *hsp70B locus.* Three *hsp70* paralogous are shows in coordinates in red and the abundance of alignment counts are in blue in sequence positions. There is a high abundance of count on 5' side of *hsp70* genes only in GOF of *dAxud1* records.

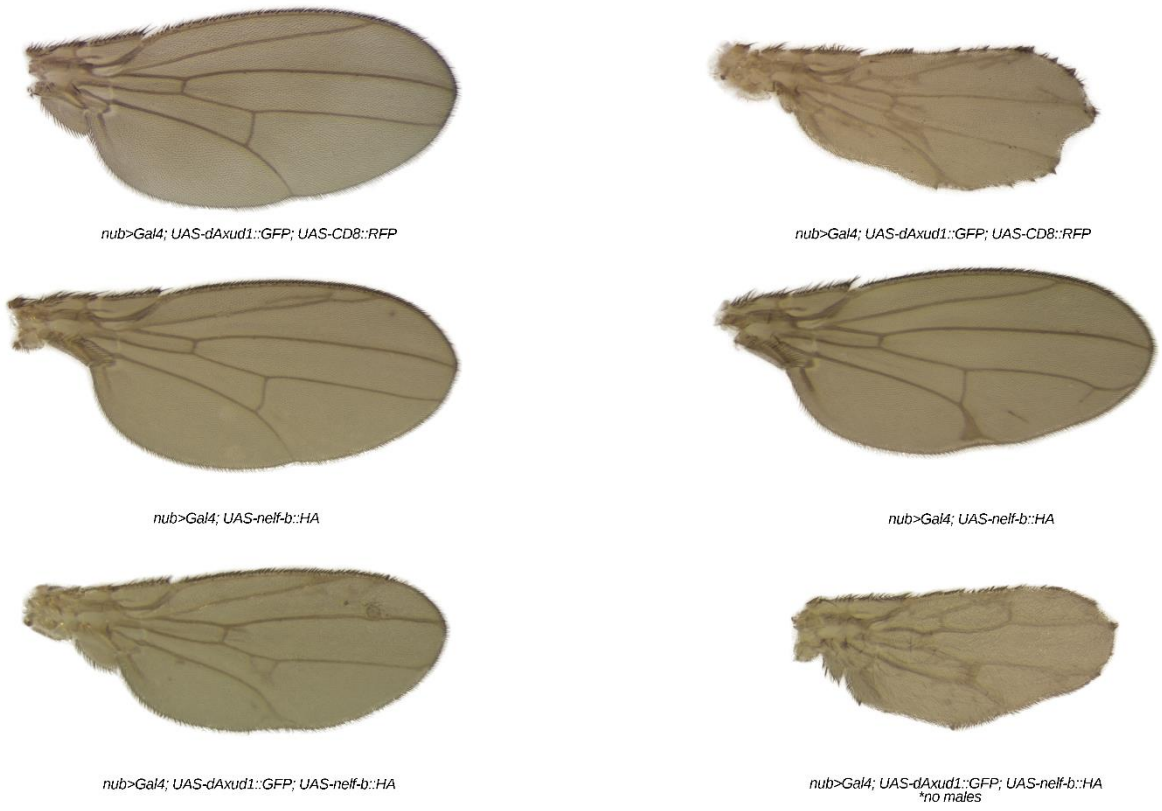


Additional Figure S4: qPCR of 5' and 3' sides of genes in *dAxud1* overexpression (DAxud1) with Gal4/UAS (*nub>Gal4; UAS-dAxud1::GFP*) in imaginal wing discs compared with control genetic background (*nub>Gal4*). Primers were design to span 5' and 3' ends on *hsp70* gene. The profiles are compared with *tubulin84 A* and *tkt-C,* this last gene rises its expression in *dAxud1* overexpression. Ct data were normalized with *actin42C*.

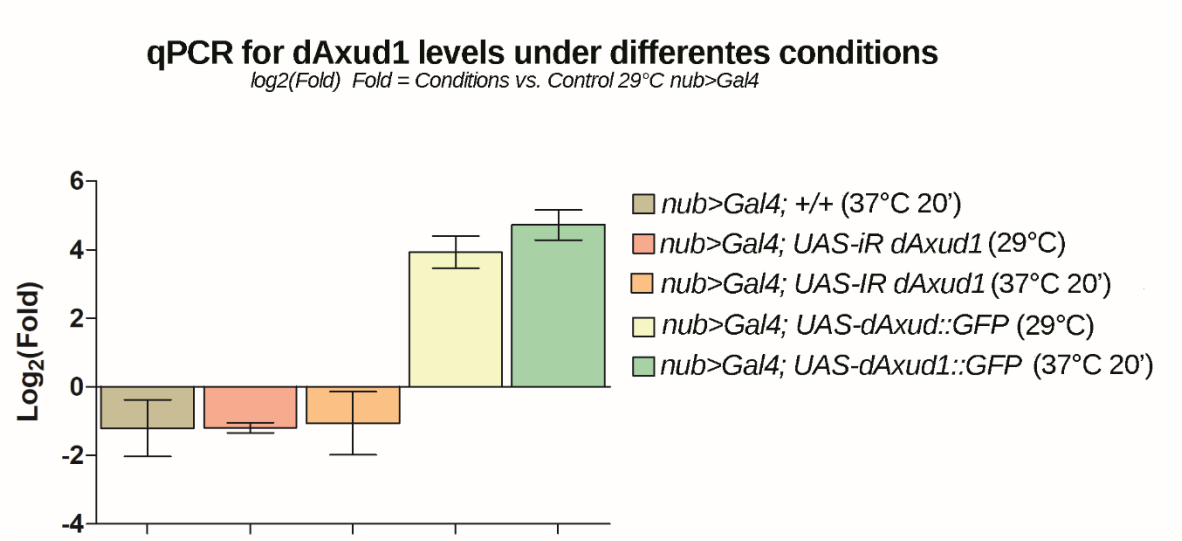


Additional Figure S5: *dAxud1* GOF qPCR for readout genes from pathways related with dAxud1 function. Actin42C was used as normalizer gene and RNA was extracted from third instar imaginal wing disc from larvae growth at 25°C.

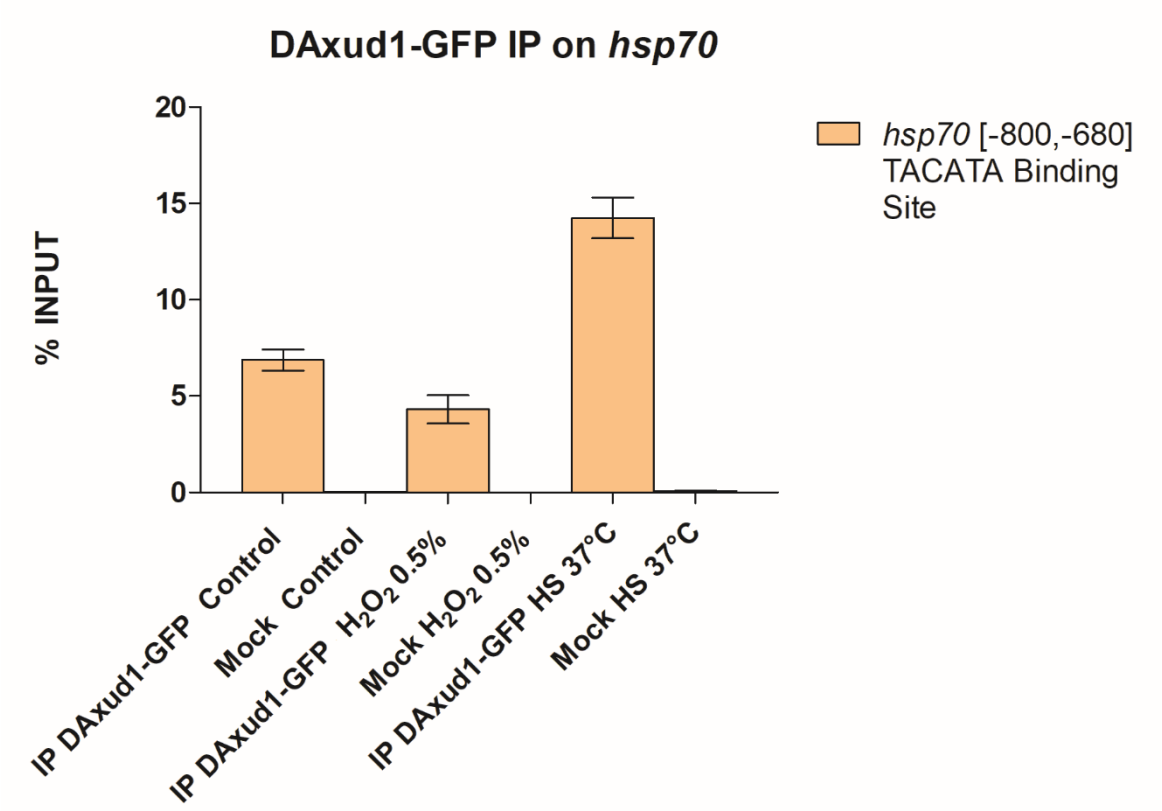
Additional Figure S6: *spt5* deficiency rescues DAxud1 overexpression phenotype.



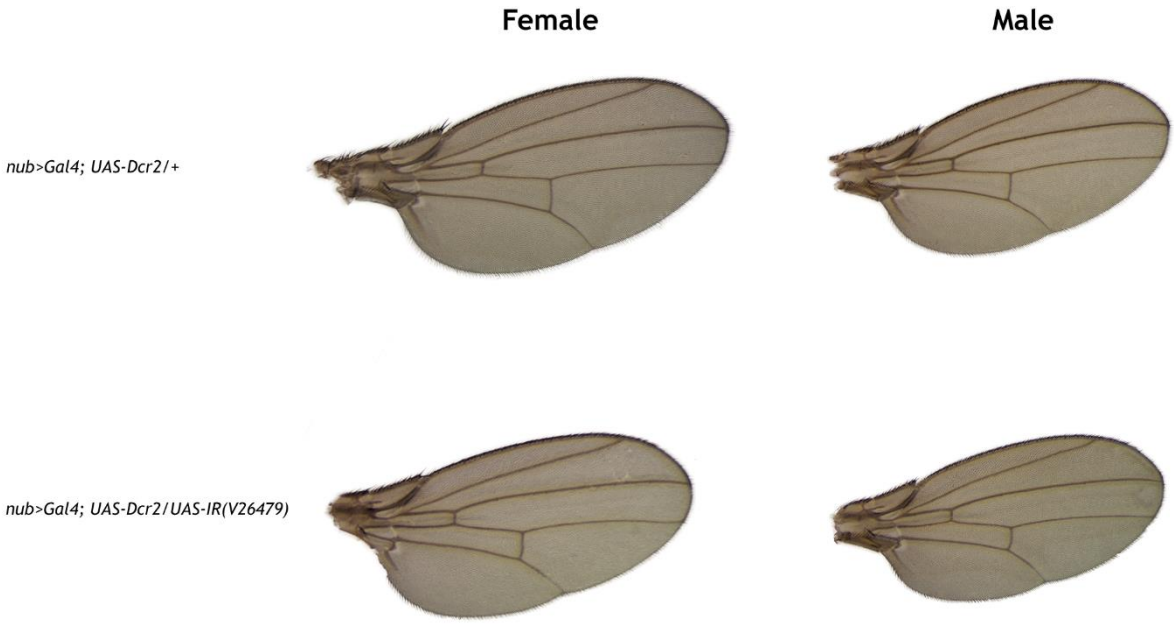
Additional Figure S7: genetic *dAxud1* interaction with Nelf-B gain and loss of function. Overexpression condition was achieved expressing NELF-B-HA (FlyORF F003904), and knockdown was induced expressing RNAi (TRiP collection Bloomington 34847).



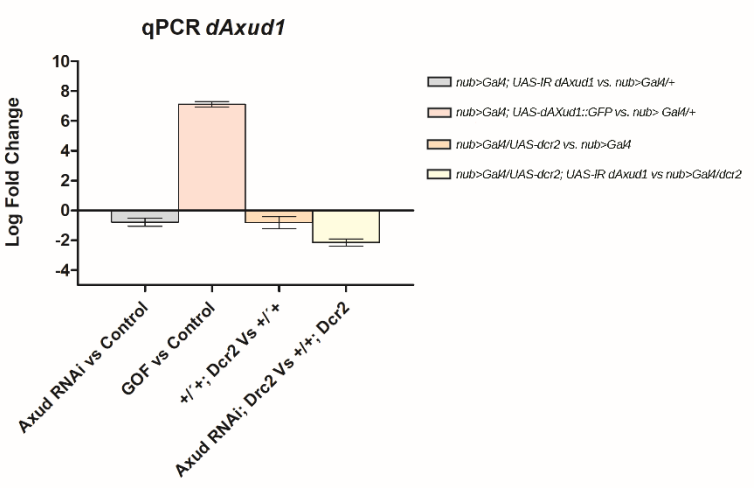
Additional Figure S8: qPCR of *dAxud1* levels in different conditions. Actin42A was used as normalizer. Heat shock was performed for 20'.



Additional Figure S9: CHIP qPCR for hsp70 promoter zone with TACATA DamID consensus motif.



Additional Figure S10: Wing phenotypes from RNAi knockdown enhanced by co-expression with Dicer 2.



Additional Figure S10: qPCR for *dAxud1* in different genotypes including expression of Dicer 2 to enhance the effect of the RNAi to manipulate *dAxud1* mRNA levels.