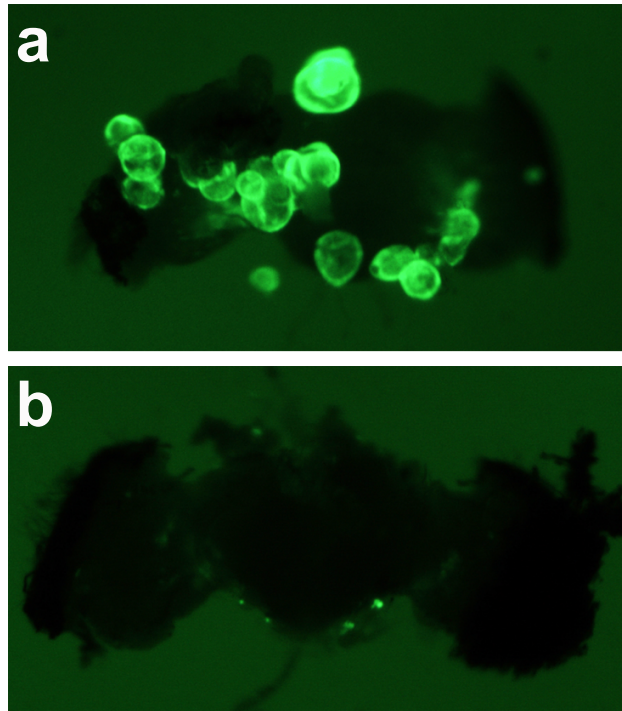


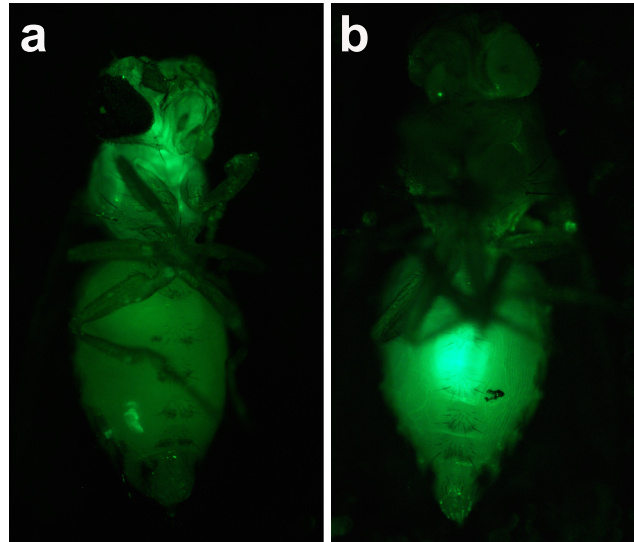
Supplementary Information

**An intrinsic tumour eviction mechanism in *Drosophila*
mediated by steroid hormone signalling**

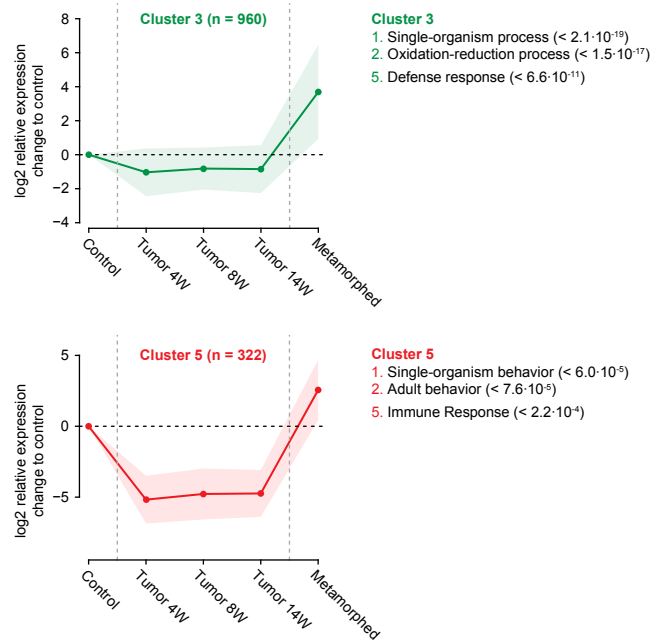
Jiang et al.



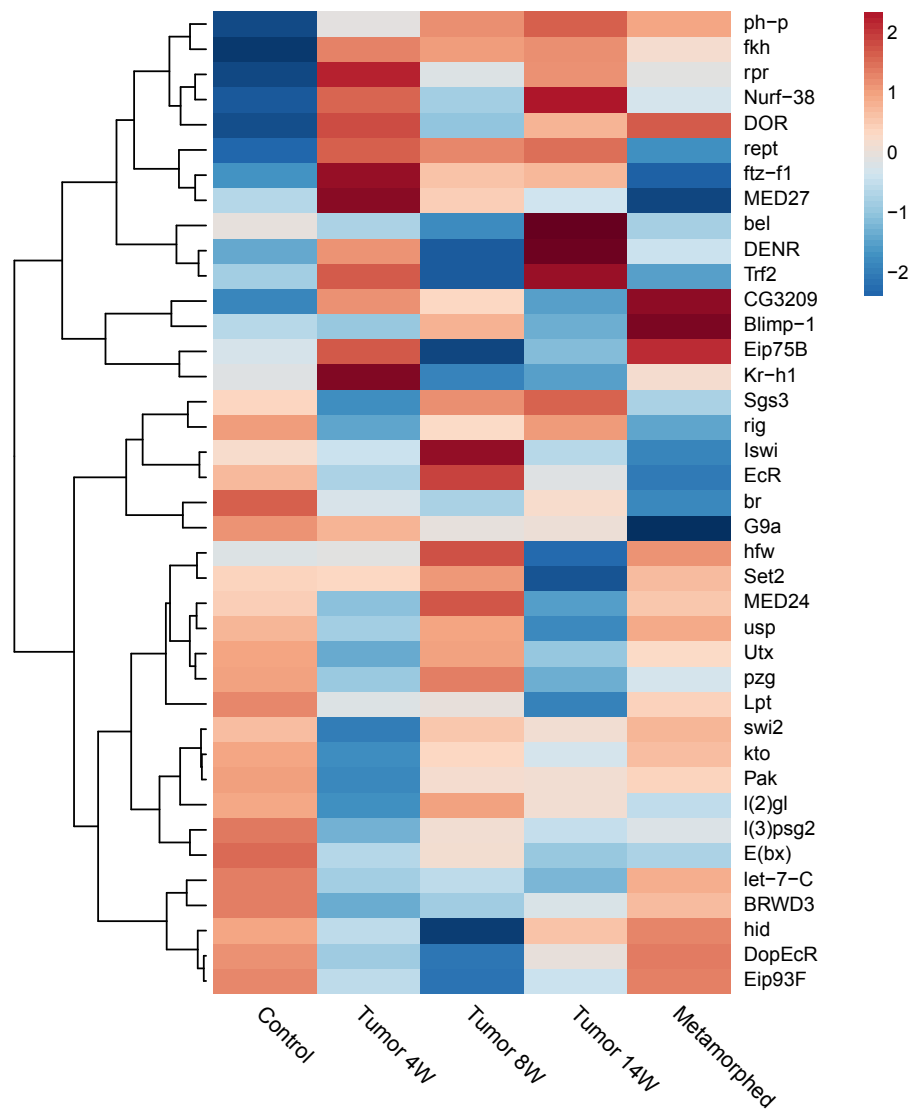
Supplementary Figure 1. **a**, GFP-marked *ph*⁵⁰⁵ cells form grape-like structures in the dissected head of one-day-old adult flies. **b**, Metamorphed *ph*⁵⁰⁵ cells in the head disappear almost completely after seven days.



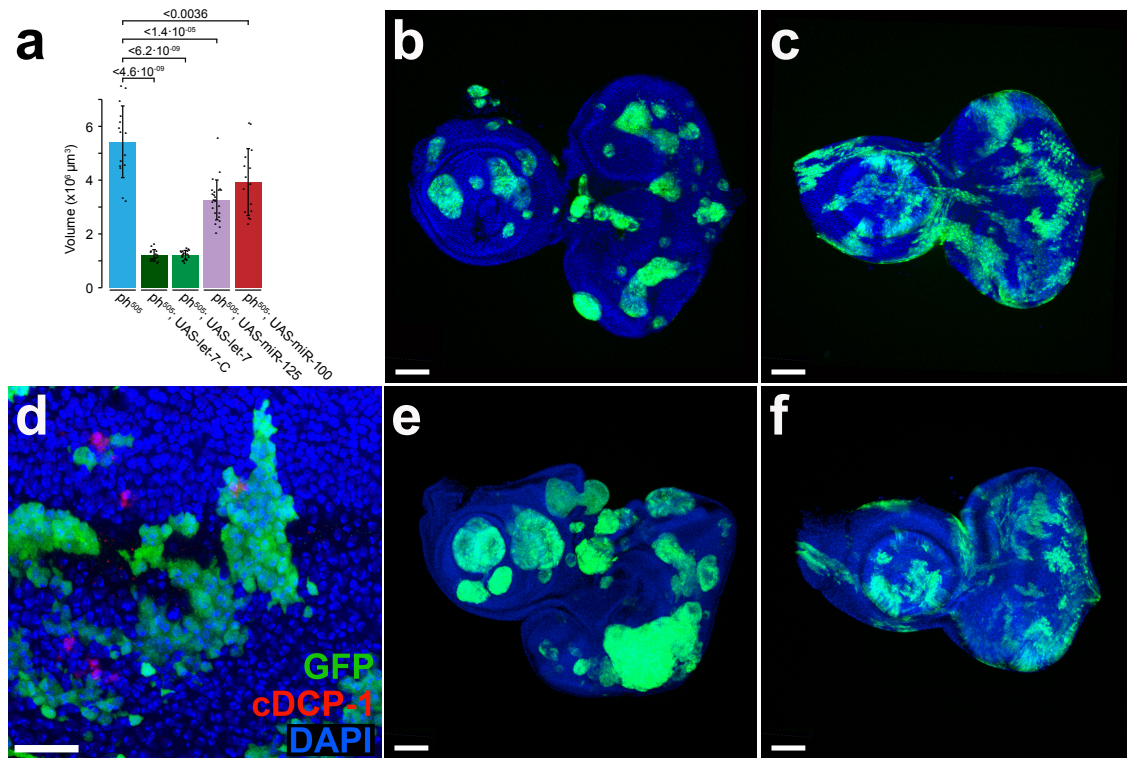
Supplementary Figure 2. **a**, An adult fly of the genotype *ph⁵⁰⁵; UAS-RNAi-usp* at two weeks after eclosion, showing the formation of tumours all over the body. **b**, Formation of tumours in a wild-type host after transplantation of adult *ph⁵⁰⁵; UAS-RNAi-usp* cells dissected from the head.



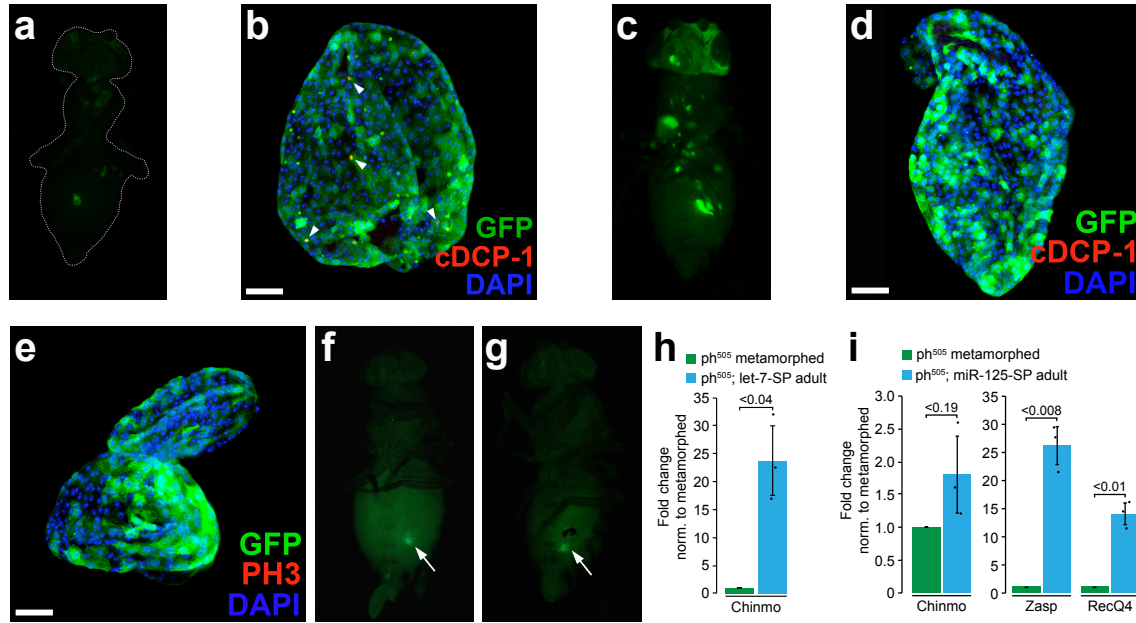
Supplementary Figure 3. Clustering analysis of significantly differentially expressed genes between control, ph^{505} tumours and non-tumorigenic metamorphosed ph^{505} cells. All n genes of each cluster lie within the shaded area, whereas the line denotes their mean.



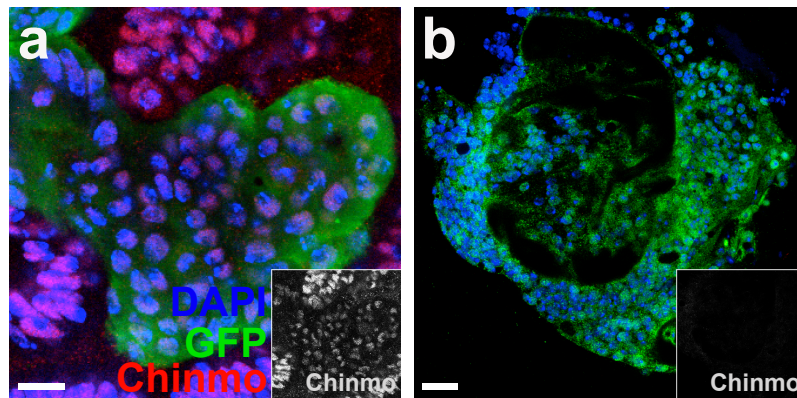
Supplementary Figure 4. Hierarchical clustering showing the expression level of all genes known to respond to ecdysone in control, tumour samples and metamorphed *ph⁵⁰⁵* cells.



Supplementary Figure 5. **a**, Mean total volume of tumour clones in the eye-antennal discs of the different genotypes. $n=15$ (ph^{505}), 14 ($ph^{505}; UAS-let-7-C$), 19 ($ph^{505}; UAS-let-7$), 24 ($ph^{505}; UAS-miR-125$), and 15 ($ph^{505}; UAS-miR-100$), with error bars denoting the standard deviation. Significance was assessed using Welch's test. **b-f**, Representative confocal images of the eye-antennal discs at wandering third instar containing clones of $ph^{505}; UAS-let-7$ (**b**), $F19A; UAS-let-7$ (**c, d**), $ph^{505}; UAS-RNAi-chinmo$ (**e**), and $F19A; UAS-RNAi-chinmo$ (**f**). Note in **d**, most of the GFP-labelled cells over-expressing *let-7* do not show the expression of the apoptosis cell marker cDCP-1. Scale bars are 50 μm (**b, c, e, f**) and 20 μm (**d**).



Supplementary Figure 6. **a**, A representative picture showing *ph*⁵⁰⁵; *UAS-mir-100-SP* cells stopped growing and disappeared in a two-week-old adult fly (indicated by dashed line). **b**, Apoptosis cell marker cDCP-1 was expressed in the *ph*⁵⁰⁵; *UAS-mir-100-SP* cells (arrowheads). **c**, A representative image showing *ph*⁵⁰⁵; *UAS-mir-125-SP* cells were still visible in a two-week-old adult fly. **d**, Apoptosis cell marker cDCP-1 was not expressed in the *ph*⁵⁰⁵; *UAS-mir-125-SP* cells. **e**, Mitosis cell marker PH3 was not expressed in the *ph*⁵⁰⁵; *UAS-mir-125-SP* cells. **f**, **g**, Adult *ph*⁵⁰⁵; *UAS-mir-125-SP* cells were transplanted into host flies (**f**, arrow), they did not give rise to neoplastic tumours but were still present after 4 weeks (**g**, arrow). **h**, Quantitative PCR analysis of the expression level of *chinmo* in *ph*⁵⁰⁵ metamorphosed cells and in adult *ph*⁵⁰⁵; *let-7-SP* cells. **i**, Quantitative PCR analysis of the expression level of *chinmo* and two candidate targets of *miR-125* in *ph*⁵⁰⁵ metamorphosed cells and in adult *ph*⁵⁰⁵; *UAS-mir-125-SP* cells. **h**, **i**, Bars denote the mean and standard deviation of three biological replicates (of three experiments conducted in total). P-values were calculated using the T-test. Scale bars are 50 μ m in all panels.



Supplementary Figure 7. Confocal images of immunostaining with Chinmo antibodies. At the third larval stage, Chinmo is expressed in the *ph⁵⁰⁵* clones in the eye discs (**a**), scale bar is 10 μ m. At 48 hours after pupal formation, the expression of Chinmo is undetectable in the *ph⁵⁰⁵* cells (**b**), scale bar is 20 μ m.