Supporting figures

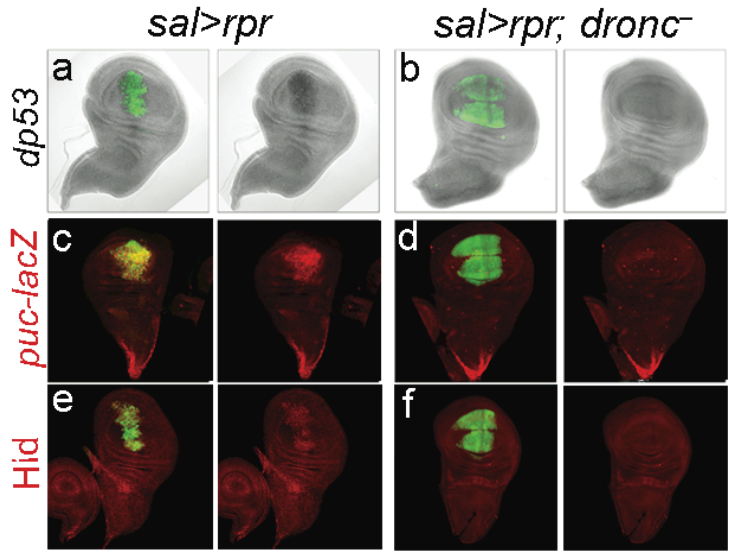

Figure S1. Dronc-mediated activation of *dp53*, JNK pathway and *hid* by Rpr

The genotype of the left hand panels is *sal^{EPv}-Gal4>UAS-GFP UAS-rpr* and that of the discs in the right panels is *sal^{EPv}-Gal4>UAS-GFP UAS-rpr; dronc⁻*. The activity of *rpr* in the *sal* domain induces *dp53* transcription (**a**), JNK activity, monitored by *puc-lacZ* (**c**) and *hid* expression, indicated by high levels of Hid protein (**e**). However, in the absence of *dronc* function Rpr is unable to induce those genes, as illustrated in the **b**, **d**, and **f** panels.

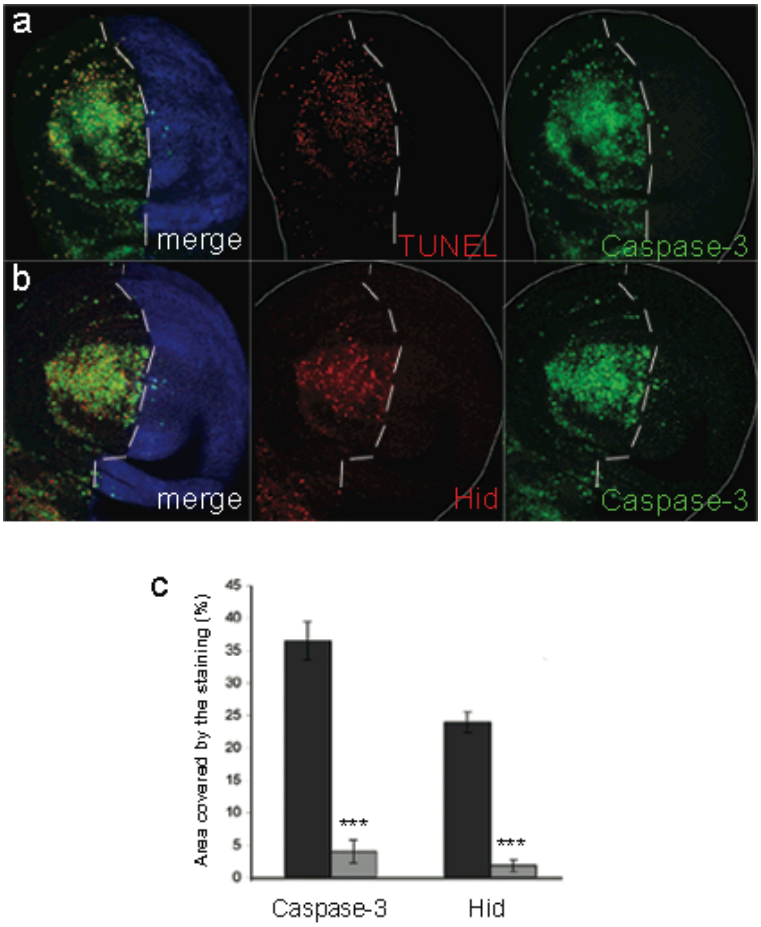

Figure S2. Supression of *hs-hid* induced apoptosis by a dominant negative form of Dp53

a) Disc of the genotype en-Gal4>UAS-GFP, UAS-p53DN; hs-hid stained for TUNEL (red) and Caspase-3 (green) fixed four hours after the heat shock. The posterior compartment is labeled in blue. There is virtually no apoptotic response in the posterior compartment. **b**) Disc of the same genotype as above showing anti-Hid (red) and anti-Caspase-3 (green) staining. **c**) Result of quantitative measurements of Caspase-3 and Hid in the anterior (dark grey) and posterior (light grey) compartments. The data were obtained as indicated in Material and Methods section. More than 20 discs were analyzed; the *p*-values are below 0.0001.

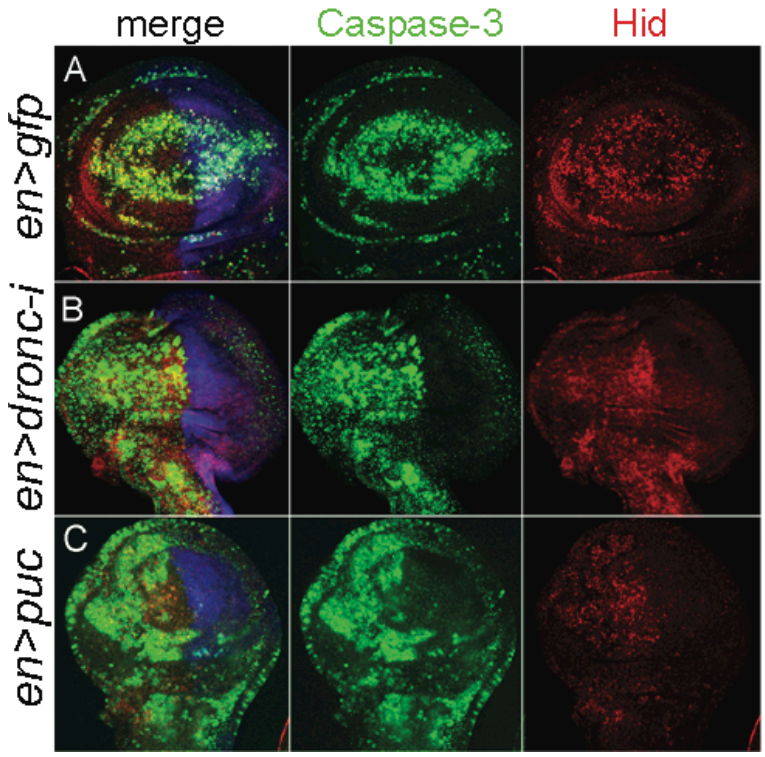

Figure S3. Apoptotic response to *hs-rpr*

a) Control *en-Gal4>UAS-GFP; hs-rpr* disc showing accumulation of Drice and Hid proteins in the entire disc. **b**) *en>Gal4>UAS-GFP UAS-dronc RNAi; hs-rpr* disc in which there is very little Drice and Hid proteins in the posterior compartment (blue). **c**) In the *en>Gal4>UAS-GFP UAS-puc; hs-rpr* disc there is also a drastic reduction of Drice and Hid in the posterior compartments.

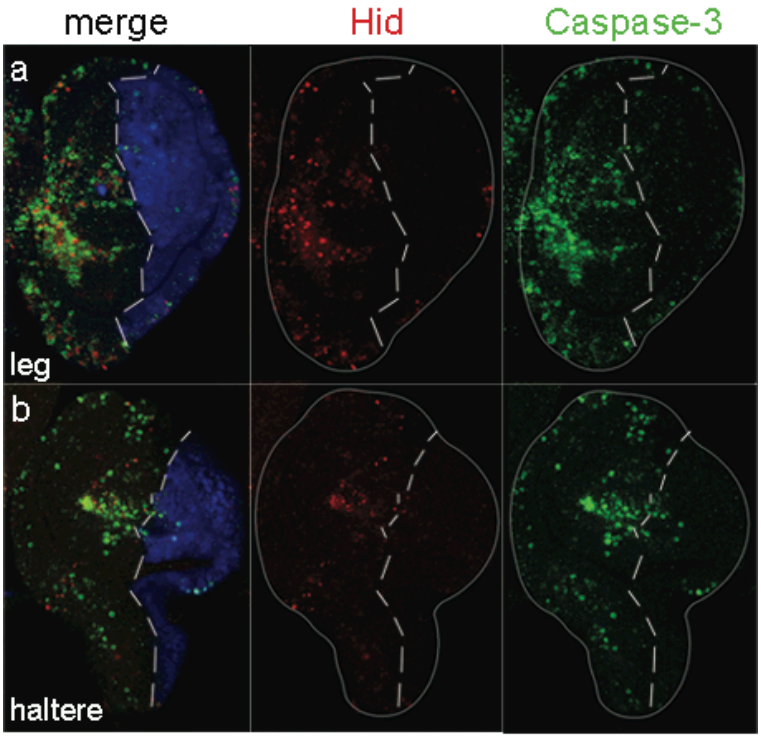

Figure S4. High levels of Hid after a pulse of *hid* in leg and haltere discs

a) Leg imaginal disc of the genotype *en-Gal4>UAS-GFP, UAS-dronc RNAi; hs-hid* showing anti-Hid (red) and anti-Caspase-3 (green) labellings four hours after the heat shock treatment. The posterior compartment is in blue. **b**) A haltere disc of the same genotype stained with the same antibodies as in a). In both cases the number of Hid positive cells is less in the posterior compartment when compared to the anterior.

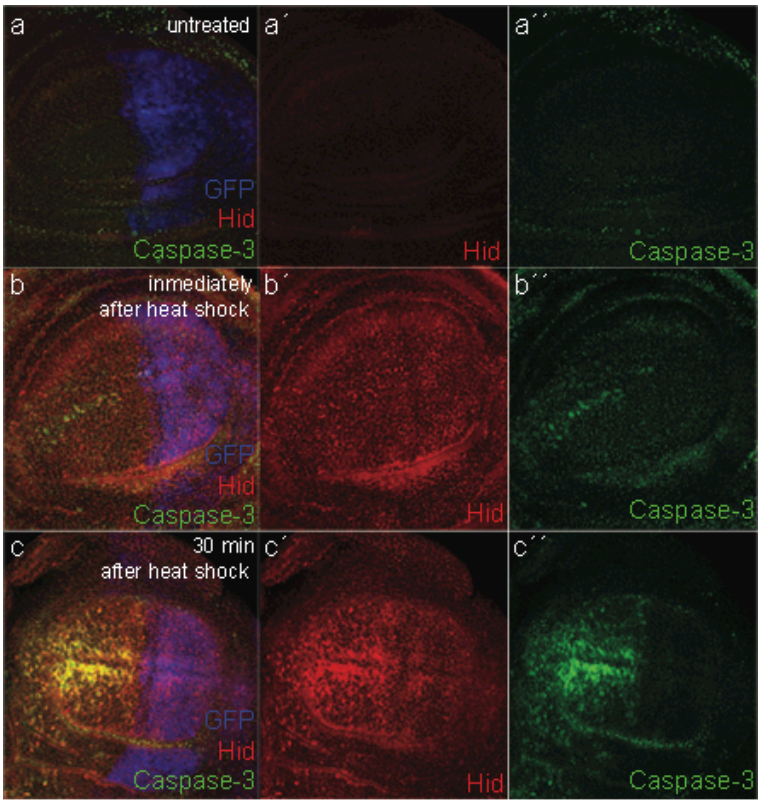

Figure S5. Amount of Hid induced by the heat shock

a) shows the staining with anit-Hid in a disc of the genotype *en-Gal4>UAS-GFP, UAS-dronc RNAi; hs-hid* that has not been subjected to heat shock. The levels of Hid are almost undetectable (**a´**). The panels **b, b**)´ illustrate the amount of Hid in a disc of the same genotype fixed just after the heat shock treatment. No difference is observed between the anterior and posterior compartments.

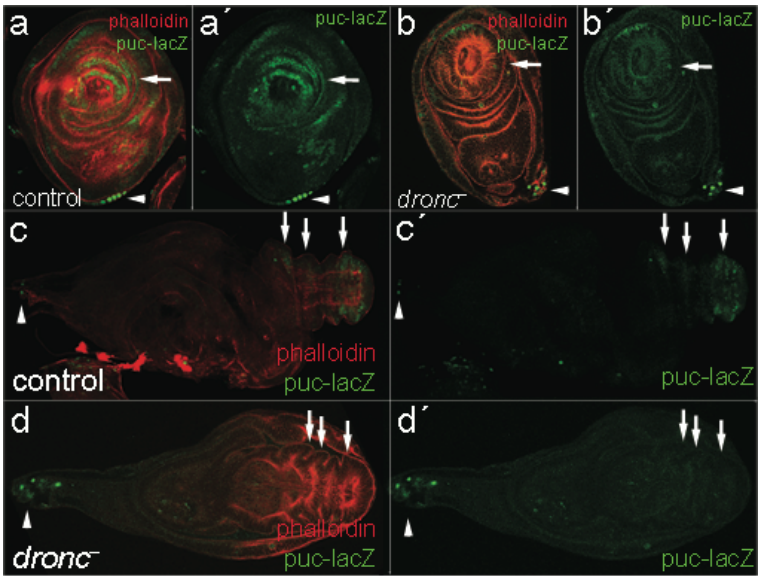

Figure S6. JNK activity in the leg imaginal discs in absence of *dronc* function

a, a´) Control *puc*^{E69}*-lacZ*/+ late third instar leg imaginal disc showing rings of *puc* activity (green) in the distal region (arrow). The arrowhead indicates the non-apoptotic expression of *puc* in the stalk of the disc. **b, b´**) panels show the expression of *puc* in *dronc*^{I24}, *puc*^{E69}*-lacZ*/*dronc*^{I29} (*dronc*$^{-}$) leg discs. The distal rings are no longer seen (arrow), although the expression in the stalk remains. **c, c´**) Control everted leg disc from an early pupa showing clear bands of *puc* activity in the presumptive distal joints (arrows). This pattern disappears in *dronc*$^{-}$ mutants (**d, d´**).