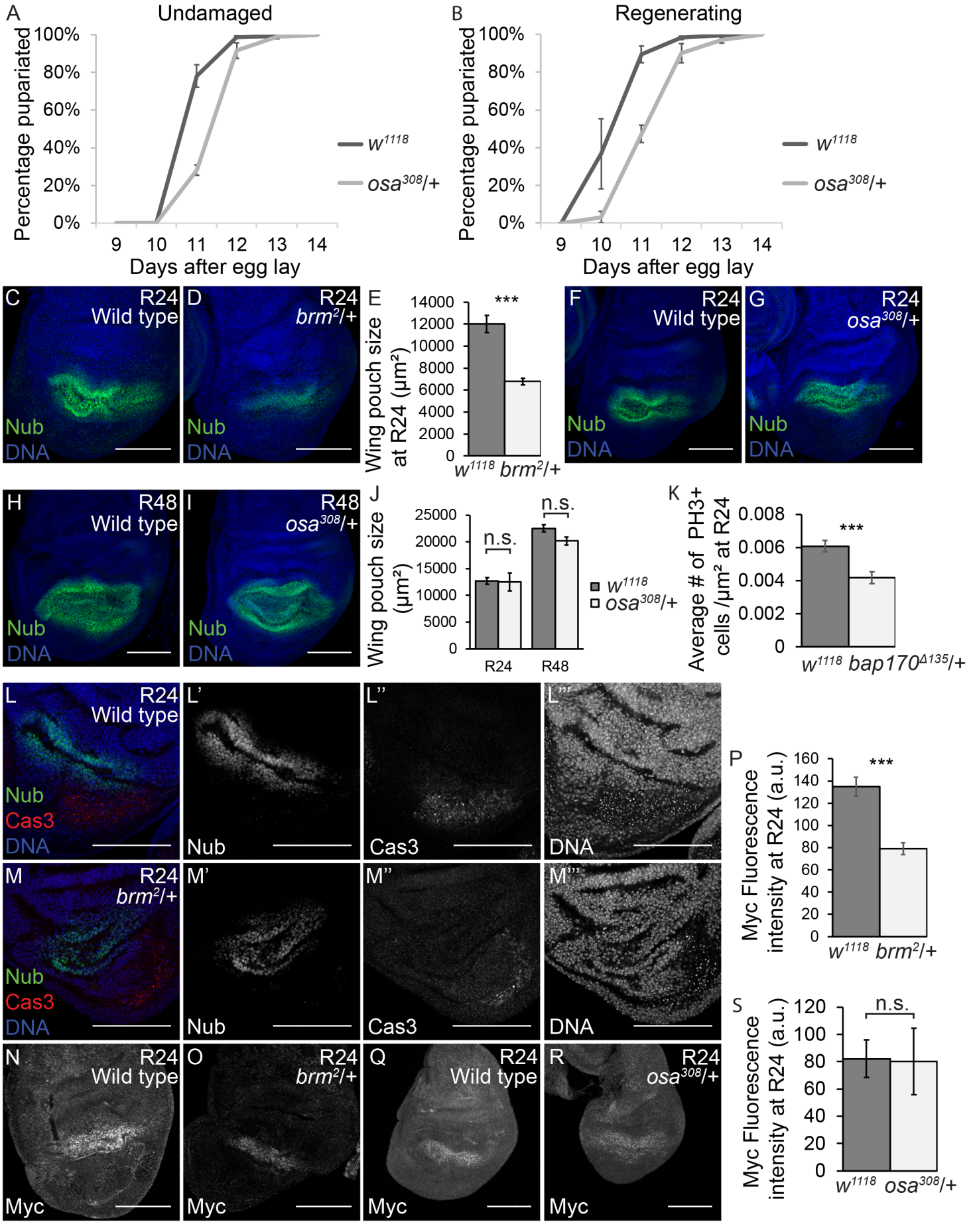
Supplemental Figure 1



S1 Fig. The PBAP complex is required for regenerative growth whereas the BAP complex is not.

(A) Pupariation rates of animals during normal development at 18°C. n = 79 pupae (*osa*^{308}/+) and 173 pupae (*w*^{1118}) from 3 independent experiments.

(B) Pupariation rates of animals after tissue damage (30°C) and regeneration (18°C). n = 101 pupae (*osa*^{308}/+) and 155 pupae (*w*^{1118}) from 3 independent experiments. Because the temperature shift to 30°C in the ablation protocol increases the developmental rate, the pupariation timing of regenerating animals (B) cannot be compared to the undamaged control animals (A).

(C) Wild-type (*w*^{1118}) regenerating wing disc at R24 with wing pouch marked by anti-Nubbin (green) immunostaining. DNA (blue) was detected with Topro3.

(D) *brm*^{2}/+ regenerating wing disc at R24 with wing pouch marked by anti-Nubbin (green) immunostaining. DNA (blue) was detected with Topro3.

(E) Comparison of regenerating wing pouch size at 24 hours after imaginal disc damage in *brm*^{2}/+ and wild-type (*w*^{1118}) animals. n = 11 wing discs (*brm*^{2}/+) and 10 wing discs (*w*^{1118}).

(F) Wild-type (*w*^{1118}) regenerating wing disc at R24 with wing pouch marked by anti-Nubbin (green) immunostaining. DNA (blue) was detected with Topro3.

(G) *osa*^{308}/+ regenerating wing disc at R24 with wing pouch marked by anti-Nubbin (green) immunostaining. DNA (blue) was detected with Topro3.

(H) Wild-type (w^{1118}) regenerating wing disc at R48 with wing pouch marked by anti-Nubbin (green) immunostaining. DNA (blue) was detected with Topro3.

(I) osa^{308}/+ regenerating wing disc at R48 with wing pouch marked by anti-Nubbin (green) immunostaining. DNA (blue) was detected with Topro3.

(J) Comparison of regenerating wing pouch size at 24 and 48 hours after imaginal disc damage and regeneration in osa^{308}/+ and wild-type (w^{1118}) animals. At R24, n = 8 wing discs (osa^{308}/+) and 10 wing discs (w^{1118}). At R48, n = 6 wing discs (osa^{308}/+) and 8 wing discs (w^{1118}).

(K) Average number of mitotic cells (marked with PH3 immunostaining) per μm^2 in the regenerating wing primordium at R24 in $bap170^{\Delta 135}$/+ and wild-type (w^{1118}) animals. n = 8 wing discs ($bap170^{\Delta 135}$/+) and 10 wing discs (w^{1118}).

(L) Wild-type (w^{1118}) regenerating wing disc at R24 with Nubbin (green) (L') and cleaved Caspase 3 (red)(L'') immunostaining. DNA (blue)(L''') was detected with Topro3.

(M) brm^{2}/+ regenerating wing disc at R24 with Nubbin (green)(M') and cleaved Caspase 3 (red)(M'') immunostaining. DNA (blue)(M''') was detected with Topro3.

(N-O) Wild-type (w^{1118}) (N) and brm^{2}/+ (O) regenerating wing discs at R24 with Myc immunostaining.

(P) Quantification of anti-Myc immunostaining fluorescence intensity in the wing pouch in brm^{2}/+ and wild-type (w^{1118}) regenerating wing discs at R24. n = 11 wing

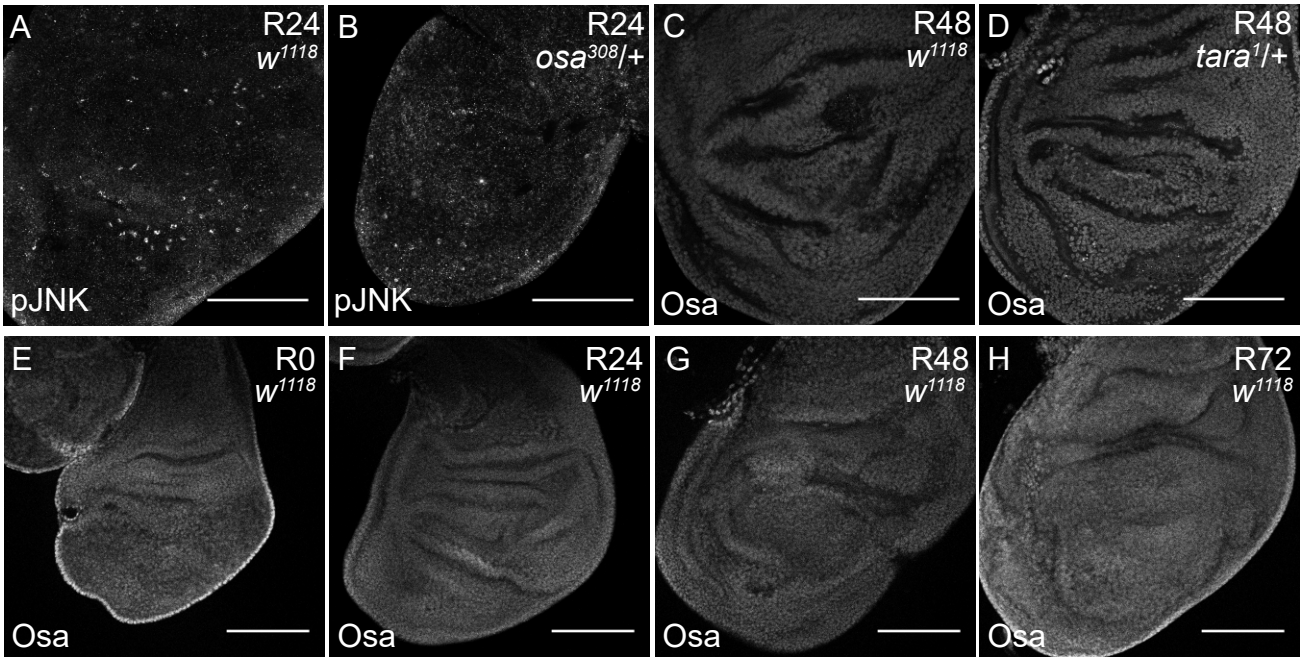
discs (*brm*^{2}/+) and 12 wing discs (*w*^{1118}).

(Q-R) Wild-type (*w*^{1118}) (Q) and *osa*^{308}/+ (R) regenerating wing discs at R24 with Myc immunostaining.

(S) Quantification of anti-Myc immunostaining fluorescence intensity in the wing pouch in *osa*^{308}/+ and wild-type (*w*^{1118}) regenerating wing discs at R24. n = 6 wing discs (*osa*^{308}/+) and 8 wing discs (*w*^{1118}).

Error bars are SEM. Scale bars are 100μm for all wing discs images. *** $p < 0.01$, Student's *t*-test.

Supplemental Figure 2



S2 Fig. The function of BAP in preventing P-to-A transformation.

(A-B) Wild-type (w^{1118}) (A) and osa^{308}/+ (B) regenerating wing discs at R24 with phospho-JNK immunostaining.

(C-D) Wild-type (w^{1118}) (C) and $tara^{1}$/+ (D) regenerating wing discs at R48 with Osa immunostaining.

(E-H) Wild-type (w^{1118}) regenerating wing discs at 0, 24, 48, and 72 hours after imaginal disc damage and regeneration with Osa immunostaining.

Scale bars are 100μm for all wing discs images.