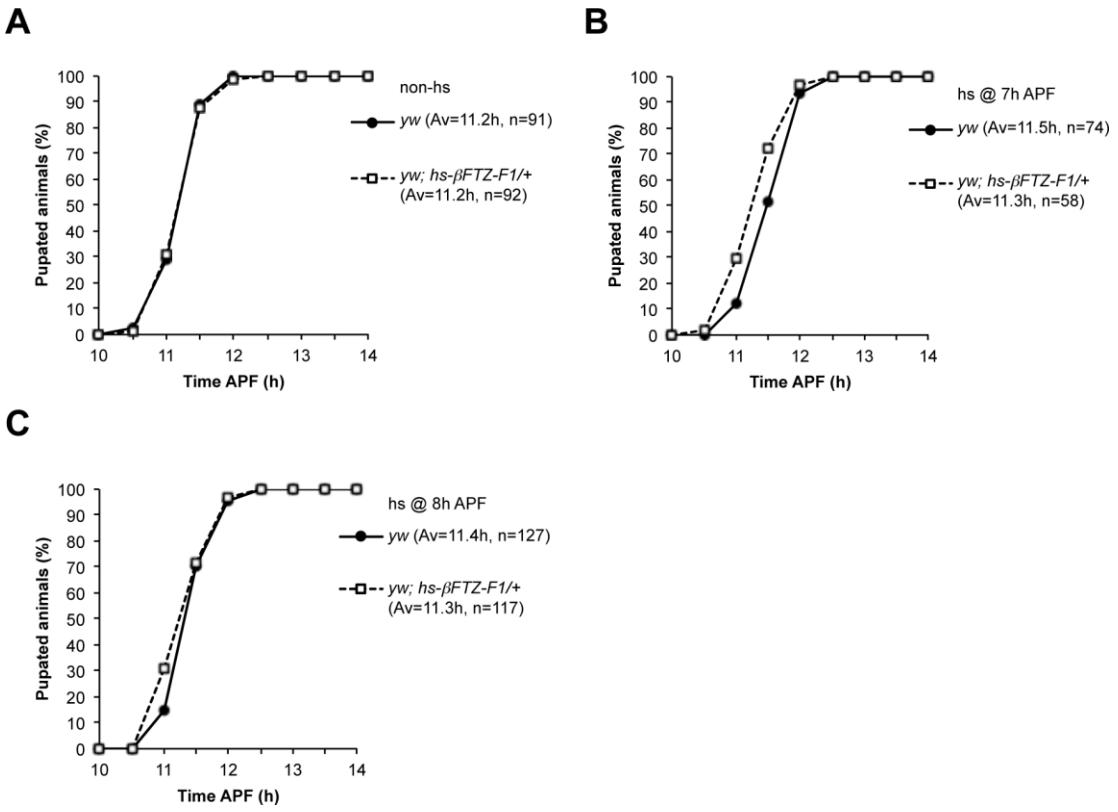

Supplementary Fig. 1. Ectopic expression of βFTZ-F1 at endogenous βFTZ-F1 expression timing does not alter pupation timing.

(A-C) Pupation timing was observed every 30 minutes after induction of βFTZ-F1. Heat shock was given at 33.5 °C for 1 hour from 7 (B) or 8 hours (C) APF in prepupae of *yw; hs-βFTZ-F1/+* and *yw*. (A) Pupation timing without heat shock in both lines are shown. No significant difference in pupation timing was observed in each condition.

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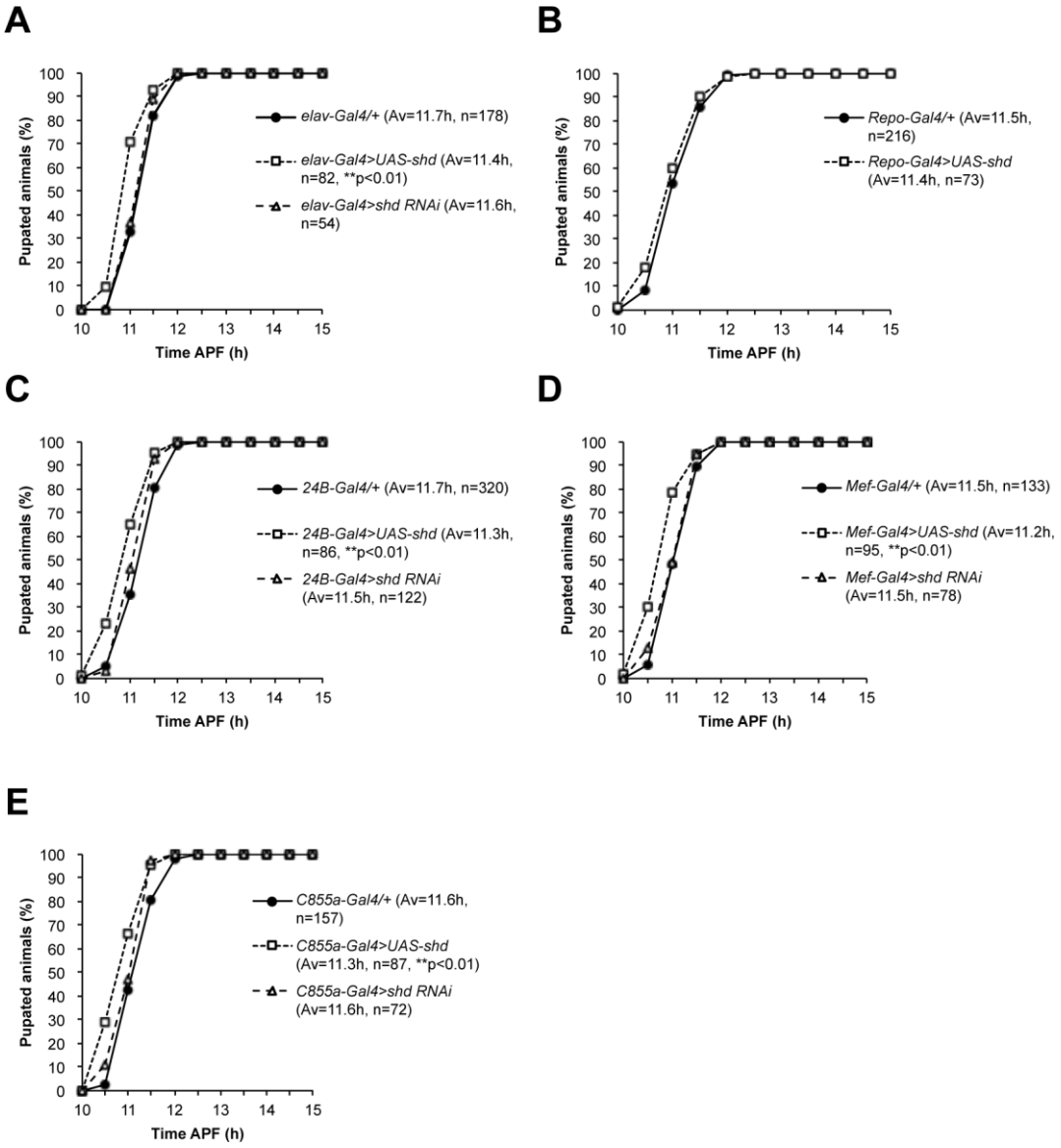

Supplementary Fig. 2. The effects of organ specific induction or knockdown of *shade* in neurons, glia, muscle or epidermis on pupation timing.

(A-E) Pupation timing was observed every 30 minutes in neurons (A), glia (B), muscle (C), muscle (D) and epidermis (E) specific *shade* overexpression (A-E) and knockdown (A, C, D and E) prepupae, respectively. No significant difference in pupation timing was observed in *shade* knockdown prepupae in different tissues (A, C, D and E) as well as the glia cell-specific *shade* overexpression (B). Significant advance in pupation timing was observed by the ectopic induction of *shade* in neuron, muscle or epidermis (A, C, D and E). **p<0.01 by KS-test, versus the Gal4 control prepupae, respectively.

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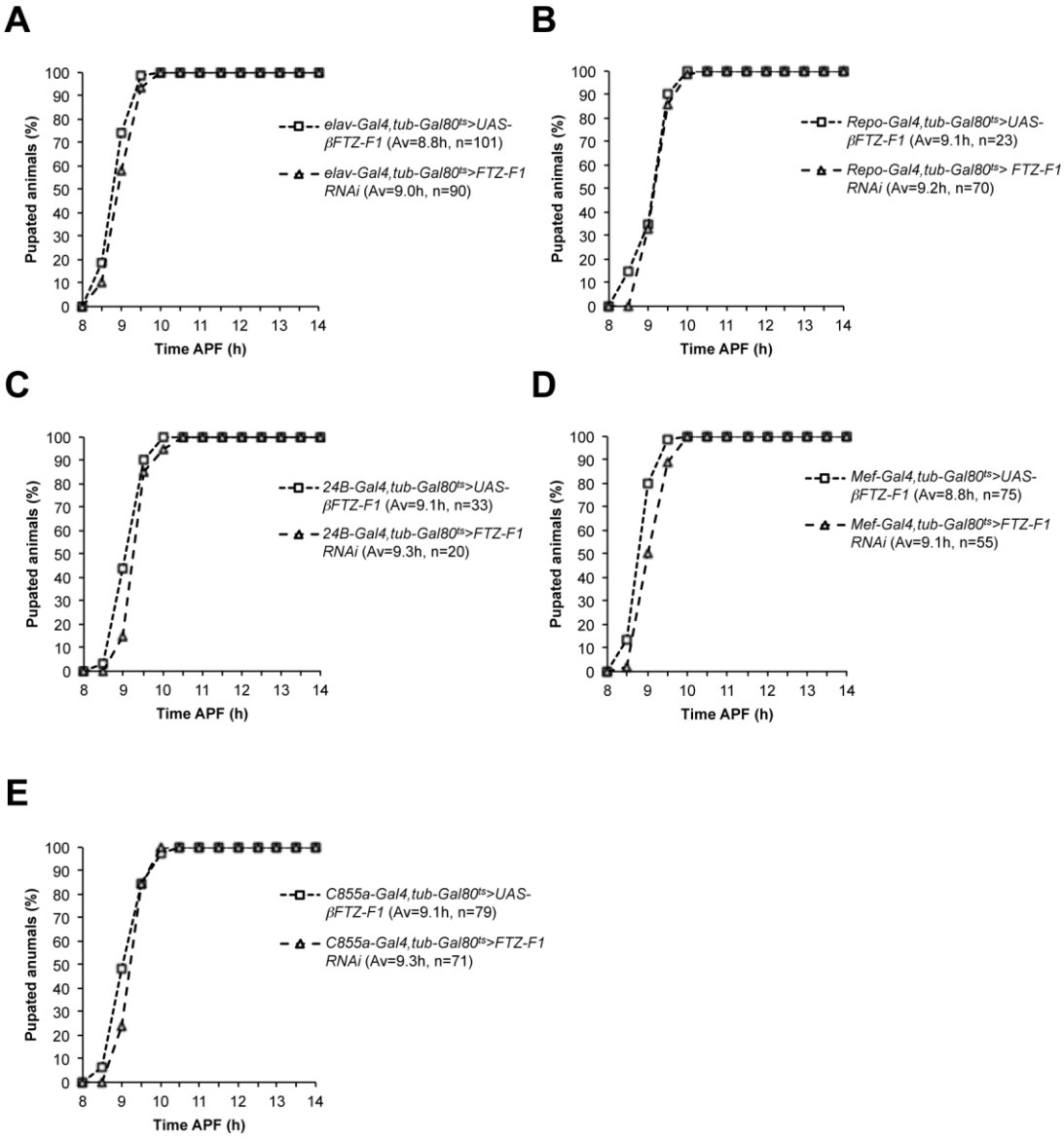

Supplementary Fig. 3. Organ specific induction or knockdown of βFTZ-F1 in neurons, glia, muscle or epidermis does not alter pupation timing.

(A-E) Pupation timing was observed every 30 minutes in neurons (A), glia (B), muscle (C), muscle (D) and epidermis (E) specific *βFTZ-F1* overexpression and knockdown prepupae, respectively. Animals carrying *tub-Gal80^{ts}* were used and cultured at 18 °C until puparium formation and then cultured at 29 °C. No significant difference in pupation timing between overexpression and knockdown were observed in each condition.

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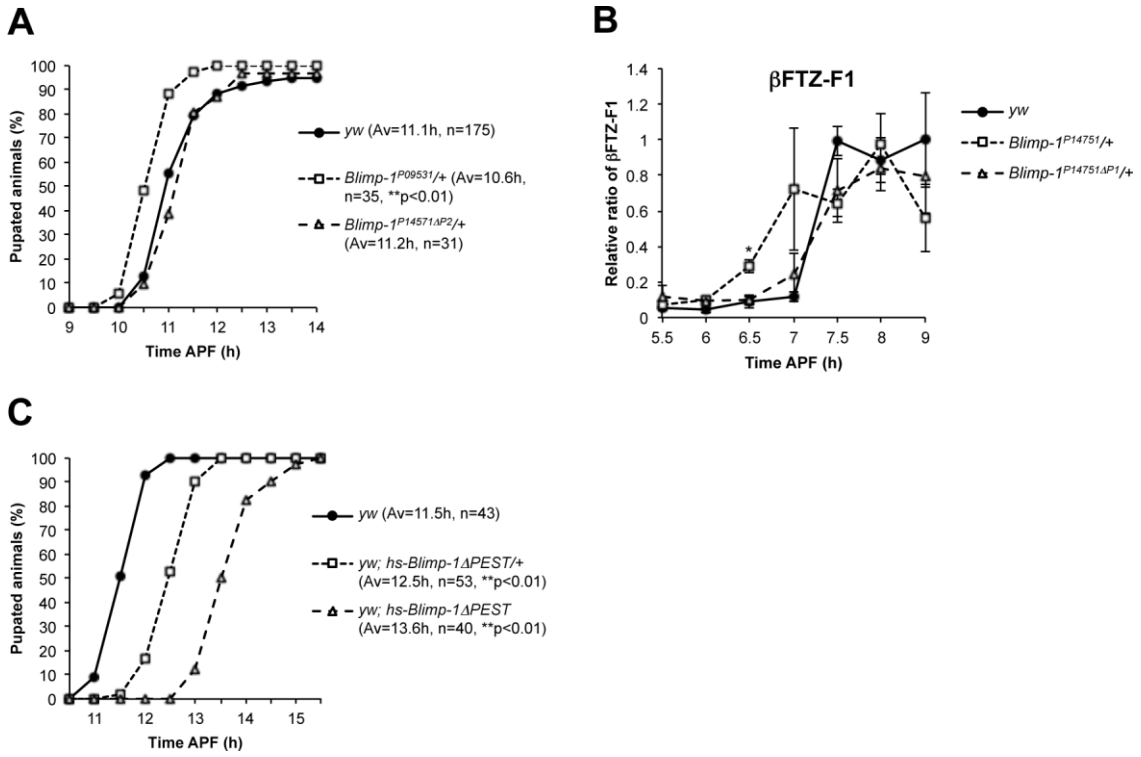

Supplementary Fig. 4. The effect of Blimp-1 expression level on the timing of βFTZ-F1 expression and pupation.

(A) The effect of endogenous gene dose of *Blimp-1* on pupation timing. Pupation timing was observed every 30 minutes in heterzygote *Blimp-1*^{P09531} mutant line and *Blimp-1*$^{P14751_{\Delta}P2}$ revertant line. Advanced pupation was also observed in this second *Blimp-1* mutant line. **p<0.01 by KS-test, versus the *yw* control. (B) The effect of endogenous gene dose of *Blimp-1* on expression timing of βFTZ-F1. Expression pattern of βFTZ-F1 in heterzygote *Blimp-1*^{P14751} mutant line and its revertant line *Blimp-1*$^{P14751_{\Delta}P1}$ were observed by Western blotting. βFTZ-F1 protein band intensities were quantified by LAS-4000mini (Fujifilm) and MultiGaugeVer.3 (Fujifilm). Significantly advanced βFTZ-F1 expression was observed in *Blimp-1* mutant line. *p<0.05 by *t*-test, versus the *yw* control at 6.5 hours APF. (C) The effect of the Blimp-1 expression level on pupation. Pupation timing was observed every 30 minutes in homo- or hetero-zygote of *yw; hs-Blimp-1ΔPEST* prepupae. Heat shock was given at 34 °C for one hour at 3 hours APF. While pupation timing was delayed for 1 hour on average in prepupae expressing a single copy of the *hs-Blimp-1ΔPEST* transgene compared to the control host strain with the same heat-treatment, 2 hours delay in pupation timing on average was observed in prepupae expressing two copies of transgene compared to the control prepupae. **p<0.01 by KS-test, versus the *yw* control.

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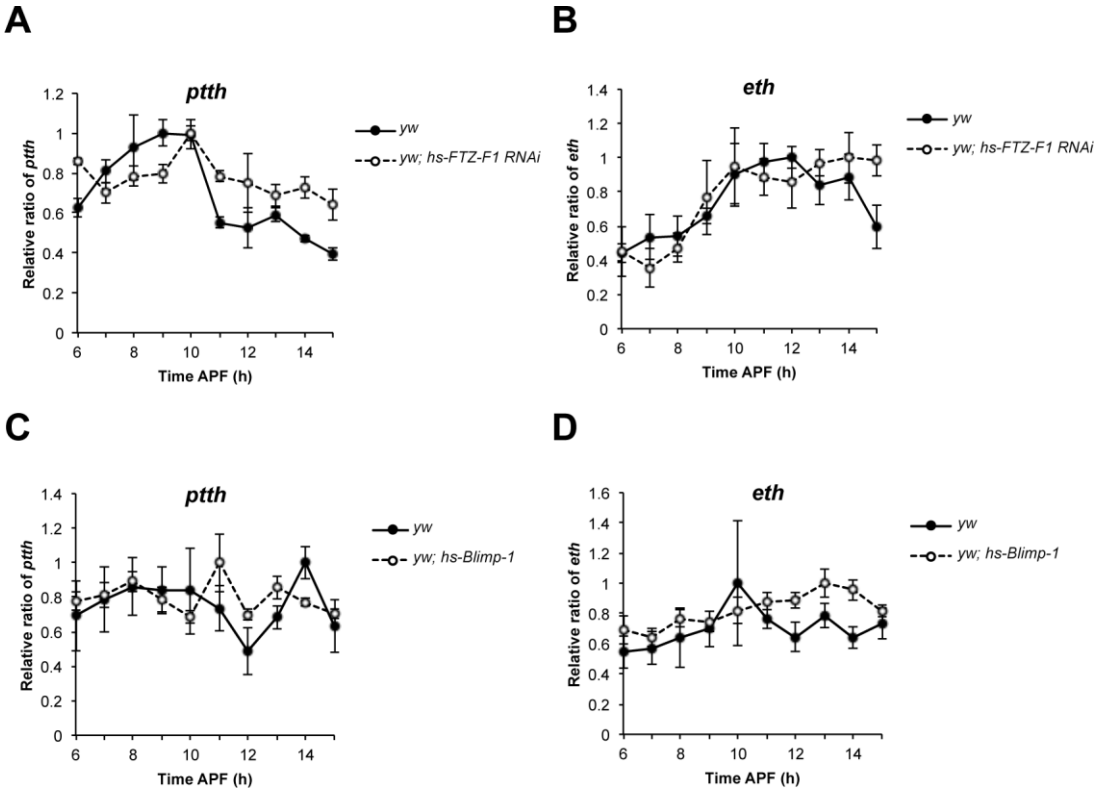

Supplementary Fig. 5. βFTZ-F1 may not regulate the *ptth* or *eth* gene during prepupal period.

(A and B) Expression patterns of *ptth* (A) and *eth* (B) transcripts were observed by RT-PCR upon *FTZ-F1* knockdown. Heat shock was given at 37°C for 1 hour at 5 hour APF in *yw; hs-FTZ-F1 RNAi* and *yw* prepupae. (C and D) Expression patterns of *ptth* (C) and *eth* (D) transcripts were observed by RT-PCR upon prolonged expression of Blimp-1. Heat shock was given at 34°C for 1 hour at 5 hour APF in *yw; hs-Blimp-1* and *yw* prepupae. The maximum transcript expression obtained from control line was set as 1 for each transcript (A-D). Error bars indicate mean±s.e.m.

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