



Supplementary information, Fig. S8 Ddx3xb deficiency impairs MZT. a, RPKM correlation of RNA-seq data between biological replicates for *ddx3xb* mutant and wild type embryos at 2 hpf, 4 hpf and 6 hpf. **b**, RPKM correlation of RNA-seq data between biological replicates for *ddx3xb* morphants and control embryos at 2 hpf and 6 hpf. **c**,

Cumulative distribution and boxplots (inside) of the \log_2 fold changes of RNA level of *ddx3xb* morphants versus control in maternal decay, maternal stable and zygotic groups at 6 hpf. *P* values were calculated by the Kruskal Wallis test. **d**, Cumulative distribution and boxplots (inside) of the \log_2 fold changes of RNA level between control and *ddx3xb* morphants in maternal decay group during the period of 2 hpf to 6 hpf. *P* values were calculated by the Kruskal Wallis test. **e**, Cumulative distribution and boxplots (inside) of the \log_2 fold changes of RNA level between control and *ddx3xb* morphants in zygotic group during the period of 2 hpf to 6 hpf. *P* values were calculated by the Kruskal Wallis test. **f**, Stage-matched embryos of wild-type (6 hpf) and *ddx3xb* mutant (7.2 hpf) embryos were collected at the shield stage. The continuous small red arrowheads denote the edge of epiboly. The big red arrowheads denote the embryonic shield. **g**, Cumulative distribution and boxplots (inside) of the \log_2 fold changes of RNA levels of *ddx3xb* mutant versus wild-type embryos in maternal decay, maternal stable, and zygotic groups at the shield stage. *P* values were calculated by the Kruskal Wallis test. **h**, Cumulative distribution and boxplots (inside) of the \log_2 fold changes of RNA levels of maternal decay group in wild-type and *ddx3xb* mutant embryos during the period of the 64-cell stage to the shield stage. *P* values were calculated by the Kruskal Wallis test. **i**, Cumulative distribution and boxplots (inside) of the \log_2 fold changes of RNA levels of zygotic group in wild-type and *ddx3xb* mutant embryos during the period of the 64-cell stage to the shield stage. *P* values were calculated by the Kruskal Wallis test.