Figure S1. Expression patterns of candidate genes in mice, using the TPM values obtained from Mammalian Reproductive Genetics database v2.0, the expression levels of 13 genes (*Ccdc58, D930020B18Rik, Elobl, Fbxw15, Nlrp2, Oas1h, Pkd1l2, Pramel34, Pramel47, Sting1, Tspan4, Tubal3, Zar1l*) were shown as heatmap. The expression patterns of *Foxl2* and *Zp2,* which are well known to have important role in the ovary, are also shown at the bottom).
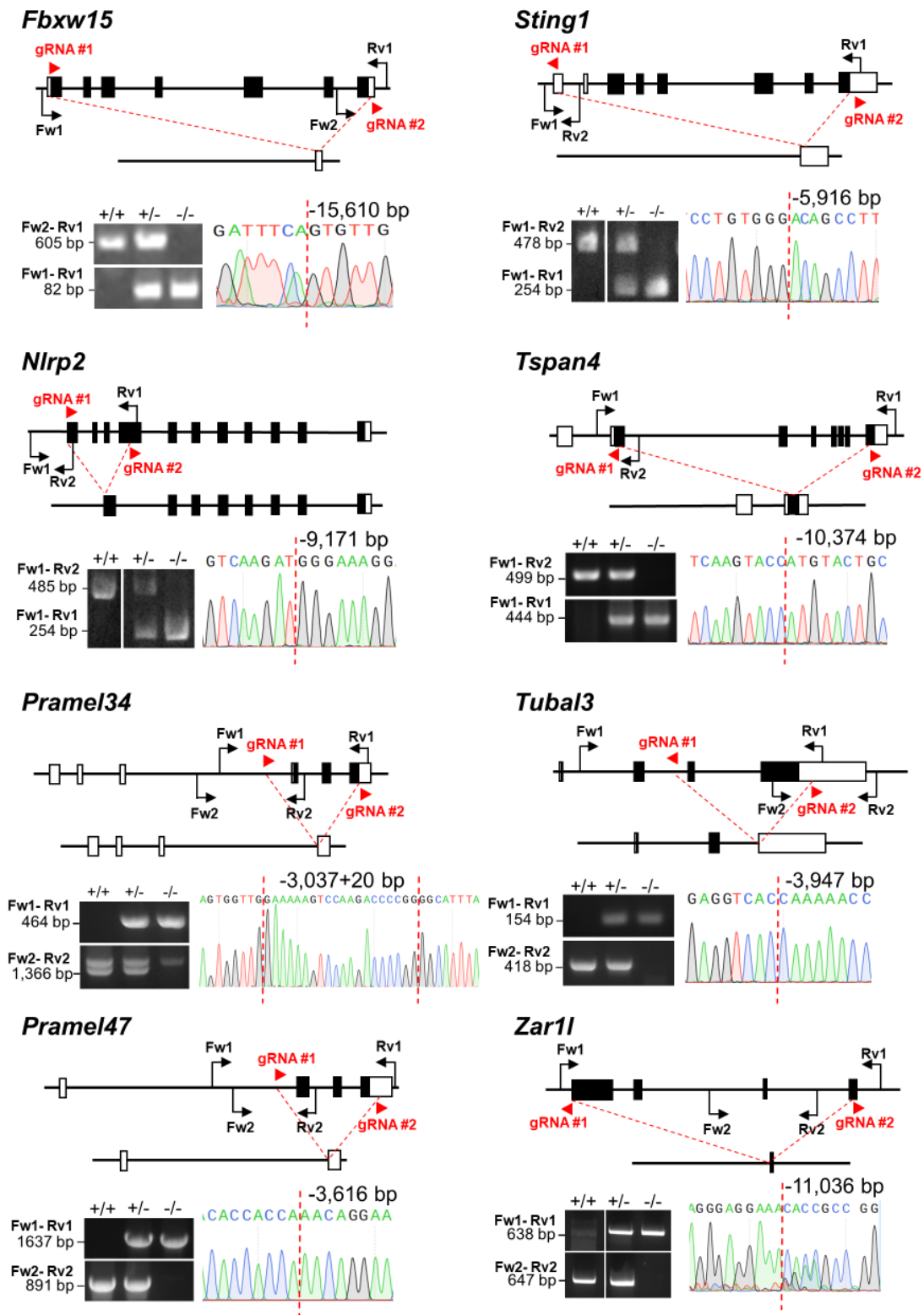
1

2

3

4

5

6

7

8

Figure S2. KO strategy, genotyping PCR and Sanger sequencing of *Fbxw15*, *Nlrp2*, *Pramel34*, *Pramel47*, *Sting1*, *Tspan4*, *Tubal3*, and *Zar1l*. Fw1/2: forward primer for the genotyping. Rv1/2: Reverse primers for the genotyping.