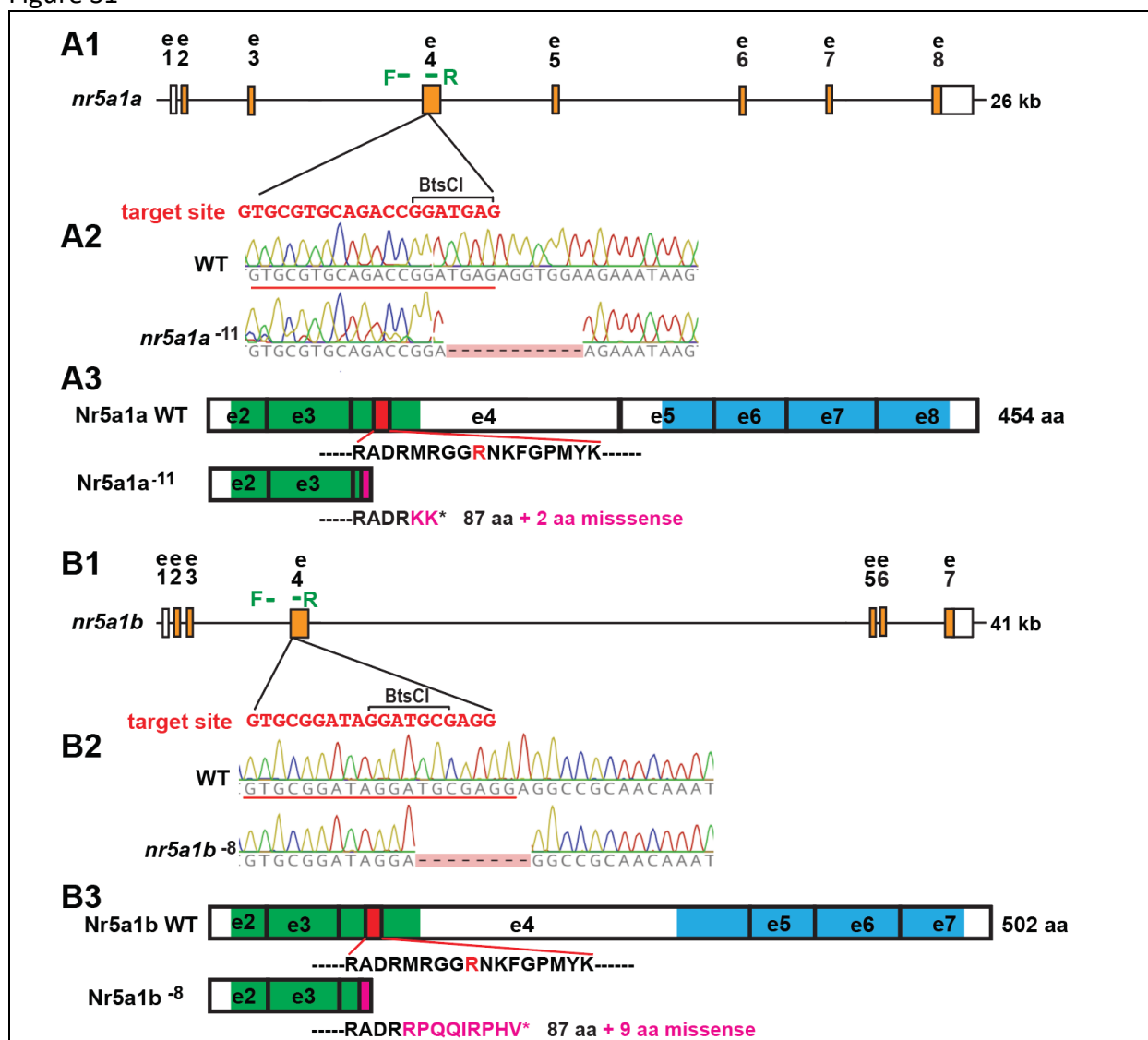


Figure S1



Supplemental Figure S1. Molecular genetics of *nr5a1a* and *nr5a1b* mutations. **A1**. A 26kb genomic section containing zebrafish *nr5a1a* showing the CRISPR target site in exon-4 (red letters). Forward (F) and reverse (R) PCR primers (green). The location of the *BtsCI* restriction enzyme site (black line) containing the polymorphism used for genotyping *nr5a1a* mutants. **A2**. Sequence traces from *nr5a1a* genomic DNA from a wild-type fish and from a -11bp deletion homozygous fish. **A3**. Predicted structure of the Nr5a1a wild-type protein and the predicted out-of-frame portion (pink); premature stop codon (*). The wild-type protein is 454 amino acids (aa) long; the mutant protein is predicted to have normal 87 amino acid residues and two missense residues resulting from the out-of-frame deletion. **B1**. A 41 kb genomic section containing the zebrafish *nr5a1b* gene showing the CRISPR target site sequence in exon-4 (red). Forward (F) and reverse (R) PCR primers (green). The location of the *BtsCI* restriction enzyme site (black line) containing the polymorphism used for genotyping *nr5a1b* mutants. **B2**. Sequence traces from *nr5a1b* genomic DNA from a wild-type fish and from an -8 bp deletion homozygous fish. **B3**. Predicted structure of the Nr5a1a wild-type protein and the predicted out-of-frame portion (pink); premature stop codon (*). The wild-type protein is 502 amino acids (aa) long; the mutant protein is predicted to have 87 appropriate amino acid residues and nine missense residues resulting from the out-of-frame deletion.

Figure S2

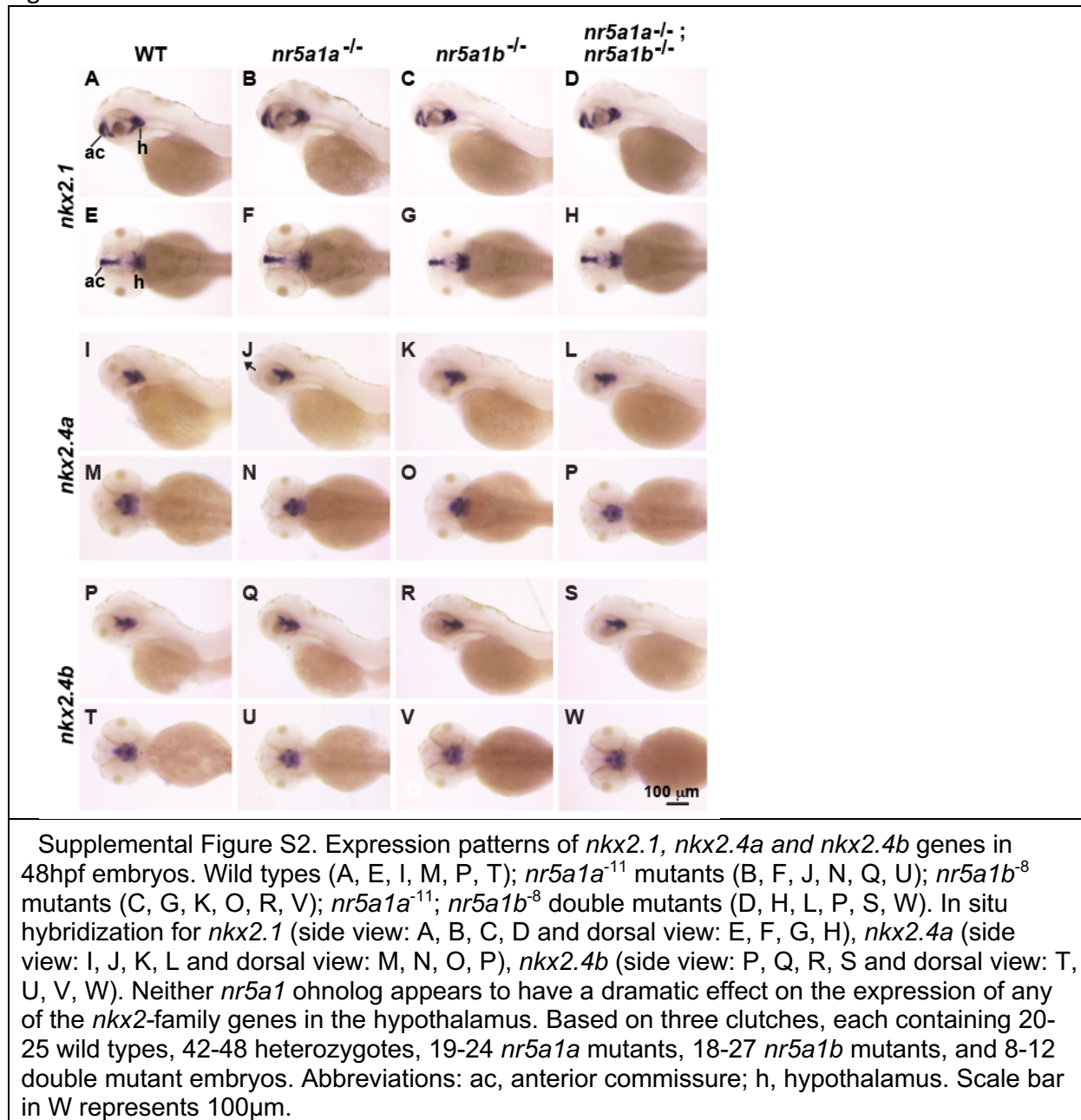
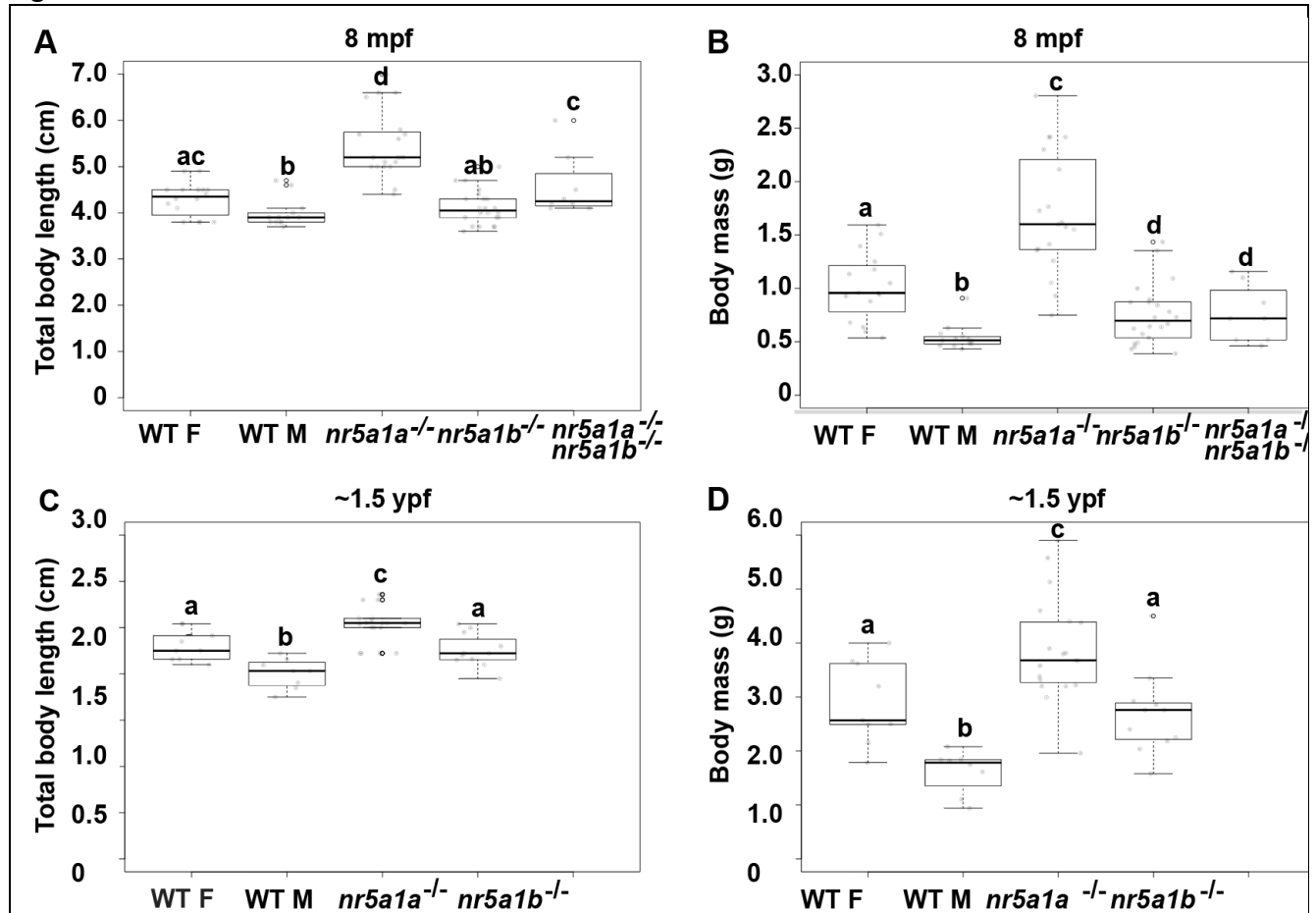
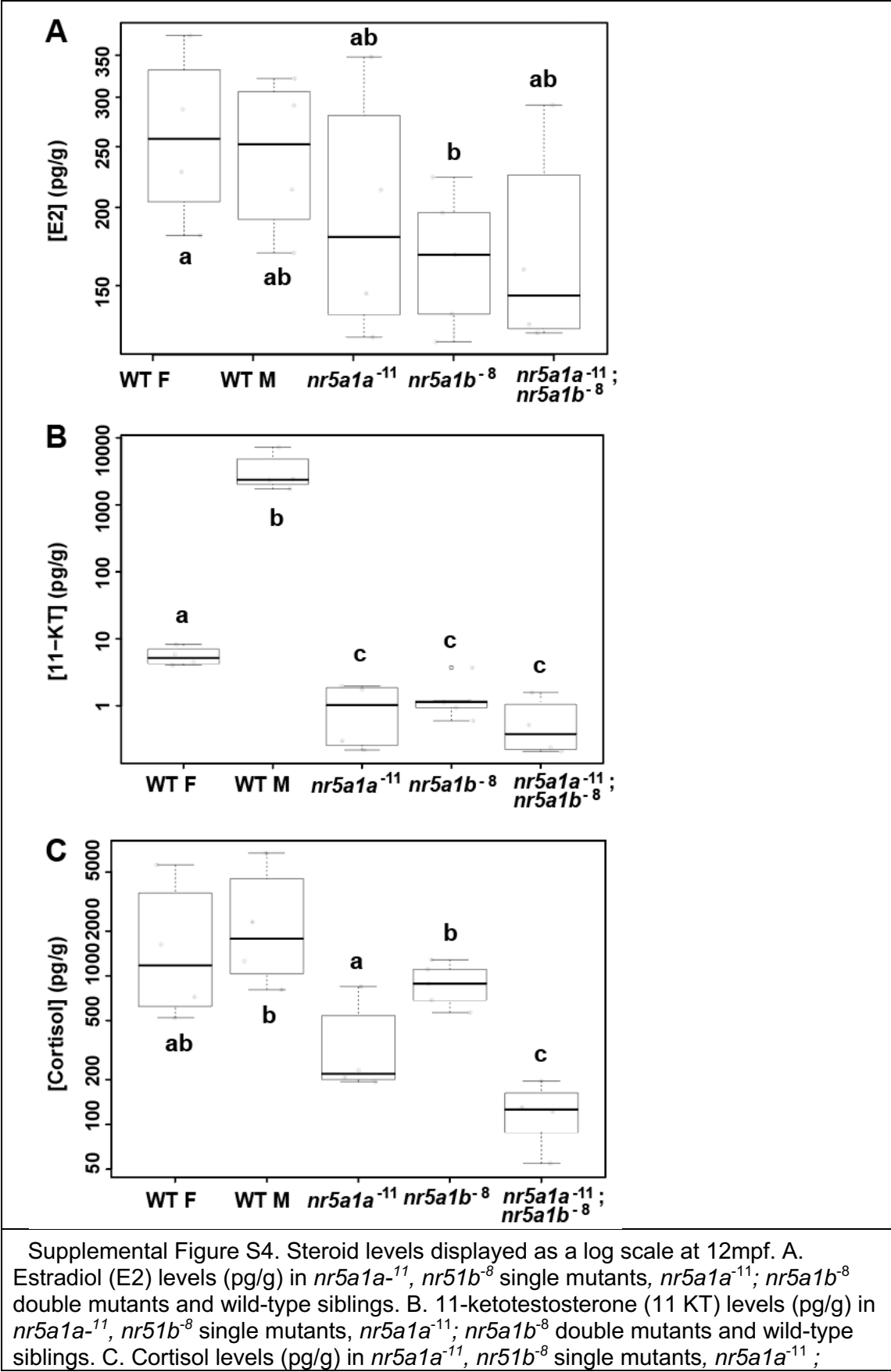


Figure S3



Supplemental Figure S3. Body length and weight in *nr5a1* mutants. A. Total body length of 8mpf adults. B. Body weight of 8mpf adults. C. Total body length of adults at about 1.5 years post fertilization (ypf). D. Body weight of adults at about 1.5 ypf. Morphometrics of adult zebrafish. (A) Body length and (B) weight of 8-month post-fertilization zebrafish (WT F (wild-type females), n=16. WT M (wild-type males), n = 13. *nr5a1a* mutants, n= 19. *nr5a1b* mutants, n = 22. *nr5a1a*;*nr5a1b* double mutants, n = 8.). Body length (C) and body weight (D) of zebrafish about 1.5 years old (WT F (wild-type females), n=3. WT M (wild-type males), n = 2. *nr5a1a* mutants, n= 10. *nr5a1b* mutants, n = 7).

Figure S4



nr5a1b⁻⁸ double mutants and wild-type siblings. WT F (wild-type females), n=4. WT M (wild-type males), n = 4. *nr5a1a* mutants, n = 4. *nr5a1b* mutants, n = 5. *nr5a1a;nr5a1b* double mutants, n = 4. Statistical significances indicated by different letters (a-e, p<0.05).