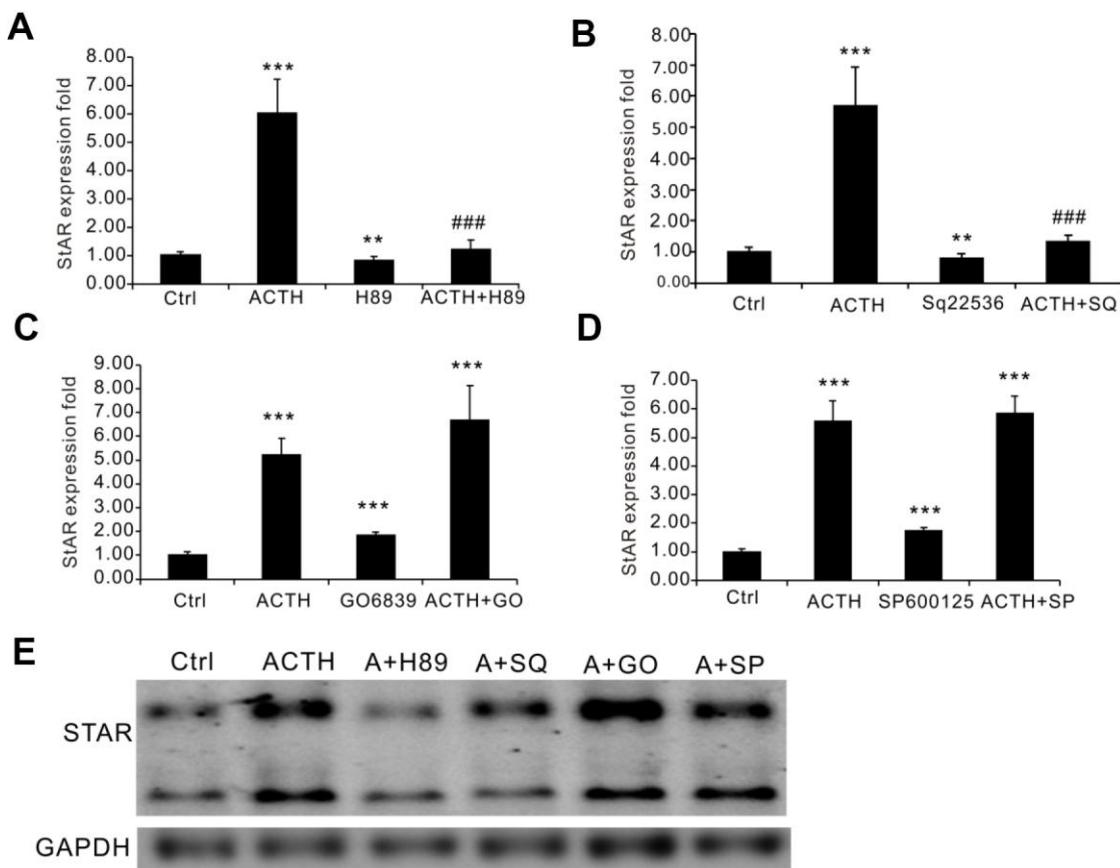
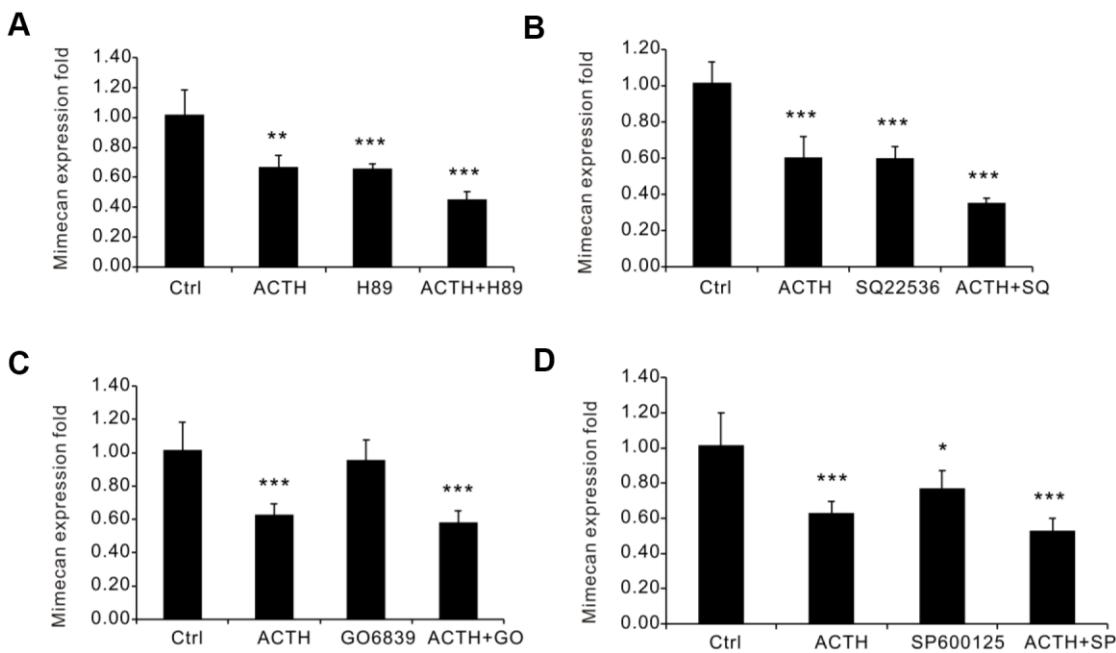


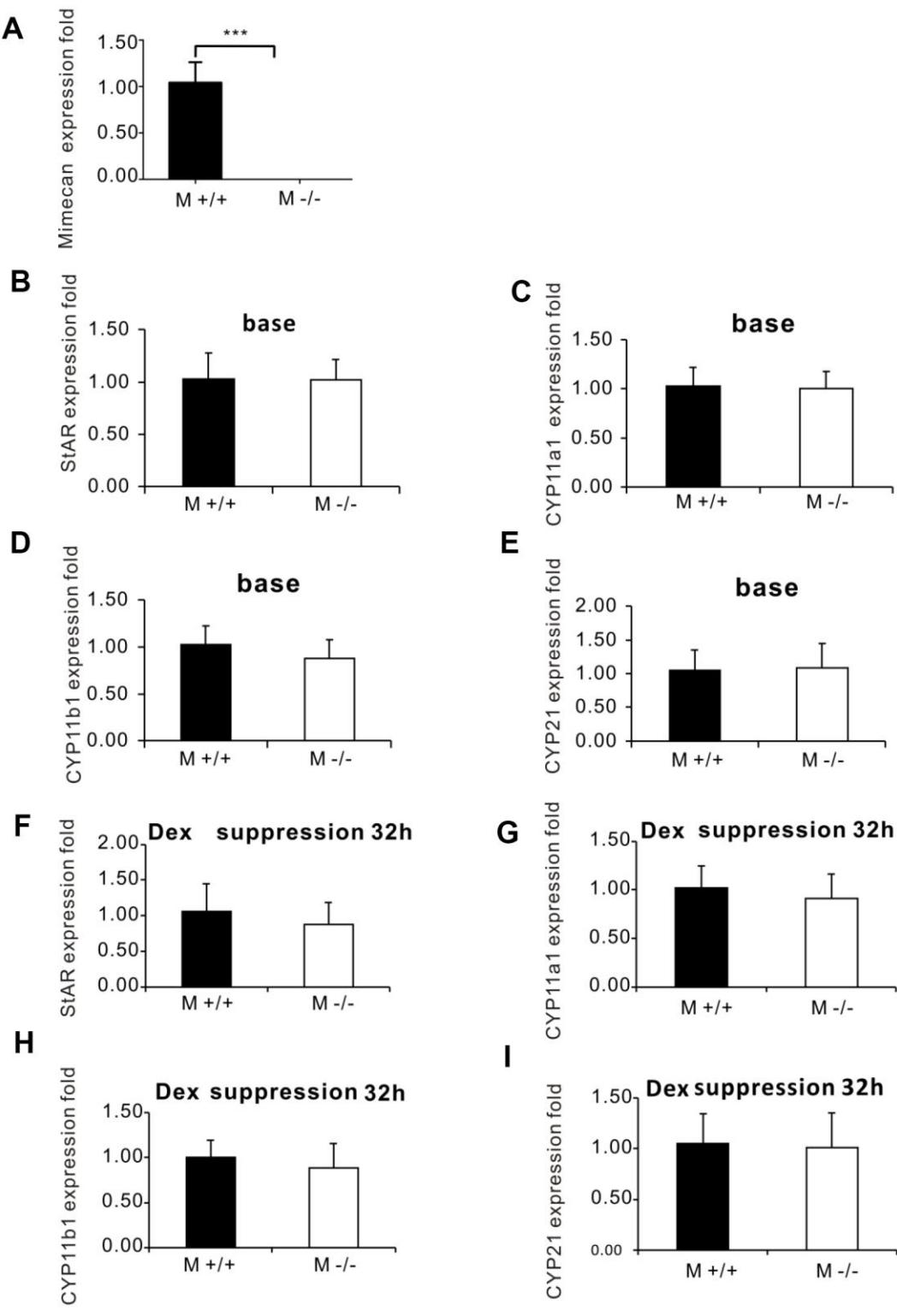
## SUPPLEMENTARY FIGURES



**Supplementary Figure 1. StAR mRNA levels in Y1 cells after stimulation by ACTH, inhibitors of related signaling pathways, or both.** (A, B) Significant upregulation of the StAR mRNA expression level was observed in Y1 cell lines after ACTH stimulation (1  $\mu$ M) for 6 h, and this was abolished by treatment with the cAMP/PKA inhibitors H89 (20  $\mu$ M) or SQ22536 (200  $\mu$ M). (C, D) Significant upregulation of the StAR mRNA expression level was observed in Y1 cell lines after ACTH stimulation (1  $\mu$ M) for 6 h, but this was not reversed by treatment with the (C) PKC inhibitor GO6893 or (D) JNK inhibitor SP600125. (E) Northern blot analysis confirmed the upregulation of the StAR mRNA expression level in Y1 cell lines after ACTH stimulation (1  $\mu$ M) for 6 h, and this was abolished by treatment with the cAMP/PKA inhibitors H89 (20  $\mu$ M) or SQ22536 (200  $\mu$ M), but it was not reversed by treatment with the PKC inhibitor GO6893 or the JNK inhibitor SP600125. Data information: \*\* $p$ <0.01, \*\*\* $p$ <0.001 for ACTH or inhibitor treatment vs. control, ### $p$ <0.001 for ACTH and inhibitor treatment vs. ACTH treatment alone, Student's t-test.



**Supplementary Figure 2. Mimecan mRNA levels in Y1 cells after stimulation by ACTH, inhibitors of related signaling pathways, or both.** (A–D) Significant downregulation of mimecan mRNA expression level was observed in Y1 cell lines after ACTH stimulation (1  $\mu$ M) for 6 h, but this was not reversed by treatment with the (A, B) cAMP/PKA inhibitors H89 (20  $\mu$ M) or SQ22536 (200  $\mu$ M), (C) the PKC inhibitor GO6893, or (D) the JNK inhibitor SP600125. Data information: \* $p$ <0.05, \*\* $p$ <0.01, \*\*\* $p$ <0.001 for ACTH or inhibitor treatment vs. control, Student's t-test.



**Supplementary Figure 3. The mRNA expression levels of corticosterone synthesis enzymes were unchanged during the base state and DEX suppression test in mim<sup>-/-</sup> mice compared with WT mice.** (A) Comparison of mRNA level of mimecan in the adrenal glands. the cycle threshold value was more than 30 in knockout mice. (B-E) mRNA levels of StAR(B), CYP11A1(C), CYP11B1(D), and CYP21(E) were not different between mim<sup>-/-</sup> and WT mice at baseline. (F-I) mRNA levels of StAR(F), CYP11A1(G), CYP11B1(H), and CYP21(I) were not different between mim<sup>-/-</sup> and WT mice at 32 h after intramuscular injection of DEX. Data information: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001 for mim<sup>-/-</sup> vs. WT mice, Student's t-test.