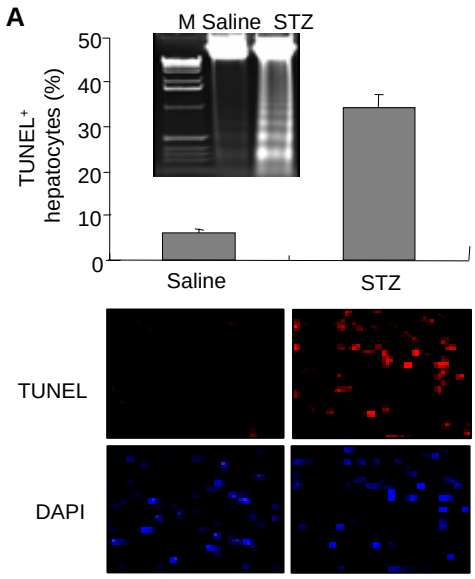
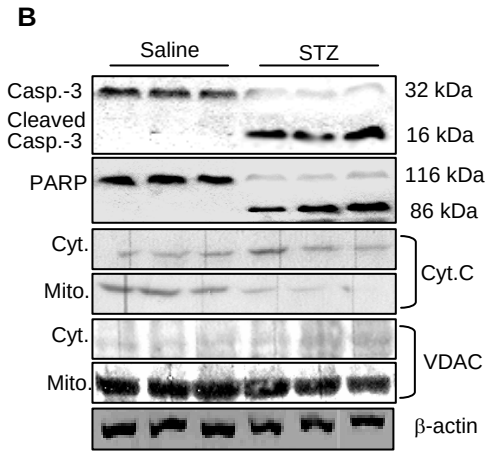
**Supplemental Figure 1:** STZ administration induces diabetes and liver injury. Control and STZ-treated mice were described in "Materials and methods." (A) Upper panel: DNA fragmentation and TUNEL assay were performed in control and STZ-treated mice. Representative DNA fragmentation is shown. The TUNEL-positive hepatocytes are counted. Lower panel: Hepatocytes were isolated from control and STZ-treated mice, and subject to TUNEL assay and DAPI staining. Representative staining is shown. (B) Expression of apoptosis-related proteins in liver (3 samples in each group are shown). Values are shown as means ± S.E.M. from four mice.

**Supplemental Figure 2:** STZ/IFN-γ induces hepatocyte apoptosis via an STAT1-dependent manner. Primary mouse hepatocytes were treated with STZ (1.5 mM), IFN-γ (100 U/ml), or STZ plus IFN-γ for 24 h. (A) TUNEL analyses of hepatocyte apoptosis. Fold induction of apoptosis was shown. (B) STZ/IFN-γ-increased apoptosis was completely abolished in STAT1$^{-/-}$ mice primary hepatocytes. (C) STAT1 siRNA abolishes STZ/IFN-γ-increased apoptosis in primary hepatocytes. Values shown are means ± S.E.M. from 3 independent experiments. In panel B, *$P < 0.01$, **$P < 0.05$ in comparison with corresponding control group.

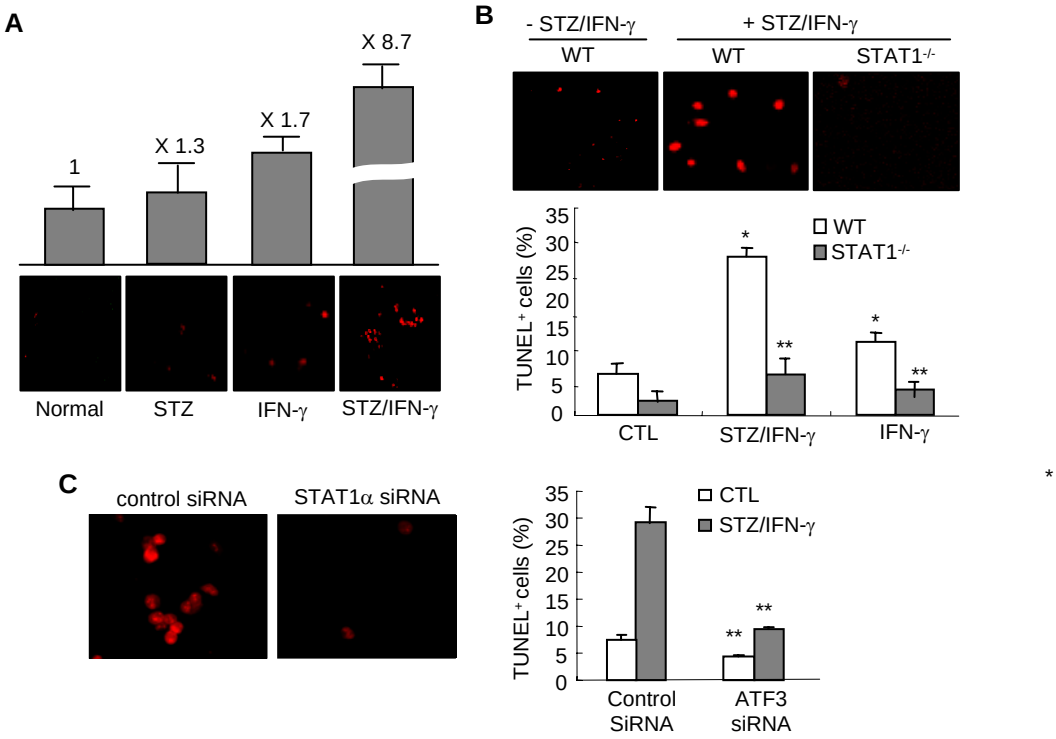
**Supplemental Figure 3:** ATF3 is required for STAT1 induction and accelerates STZ/IFN-γ-mediated hepatocyte apoptosis. (A) Effects of ATF3 siRNA on nuclear translocation of STAT1 induced by IFN-γ/STZ. Immunocytochemistry for ATF3 (green) and STAT1 (Red). (B) ATF3 siRNA inhibits apoptosis-related protein expression. (C) Cells were co-transfected with Flag-ATF3 or Flag-ATF3(ΔC) and GFP, GFP-STAT1, or GFP-STAT1F, and then treated with IFN-γ. Upper: After TUNEL assay was performed, the fluorescent microscopic images were taken for GFP (for STAT1) and TUNEL-positive cells (red), and the final merged images were shown. Lower: TUNEL-positive cells were quantified and shown by graph. *$P < 0.01$, **$P < 0.05$ in comparison with corresponding control groups.

# Supplementary Fig. 1



# Supplementary Fig. 2



# Supplementary Fig. 3