Figure S1.

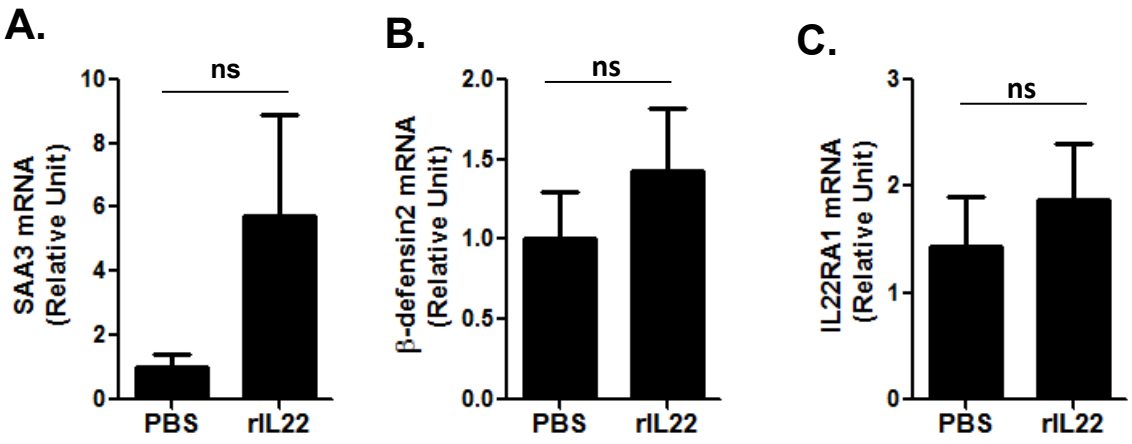

Fig S1. (A-C) Mice were given PBS or rIL-22 (200ng/mouse) intra-peritoneally. After 24h, pancreas RNA was isolated and cDNA prepared for quantitative PCR analysis. Results are shown as fold change in SAA3, b-defensin2, and IL-22RA1 mRNA expression relative to the control group. All data is presented as mean ± SEM (n> 5 mice per group).

Figure S2

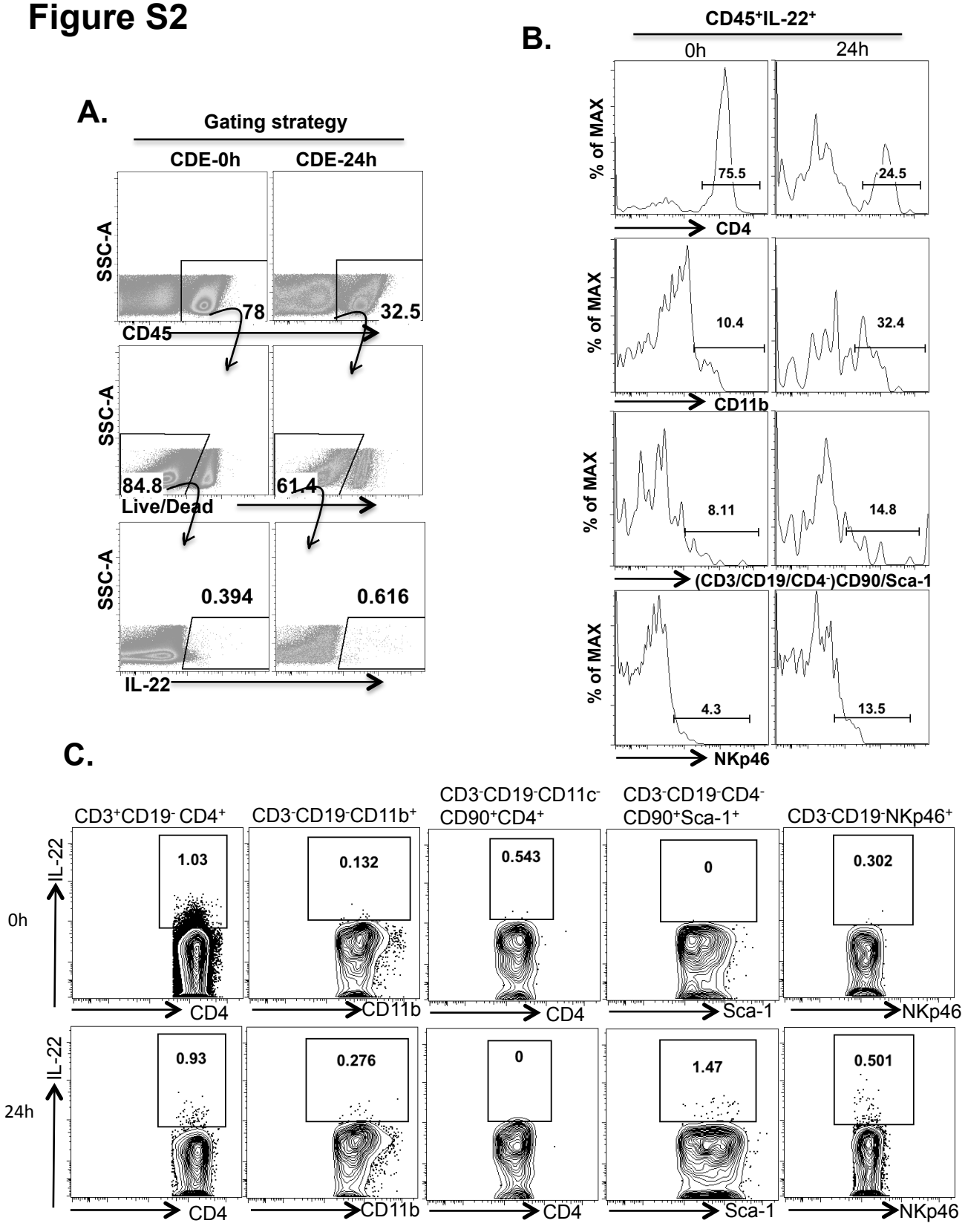

Fig S2. Balb/c mice were fed CDE diet for 0h and 24h before sacrificed. (A) Pancreatic leukocytes were isolated for intracellular staining. Gating strategy is as shown. (B) The gated CD45+IL-22+ population among the pancreatic leukocytes were further characterized by expression of CD4, CD11b, (CD3/CD19/CD4-)CD90/Sca-1 (to identify $CD4^-$ LTi), and NKp46. (C) Frequency of IL-22+ cells among different leukocyte population is shown.

Figure S3.

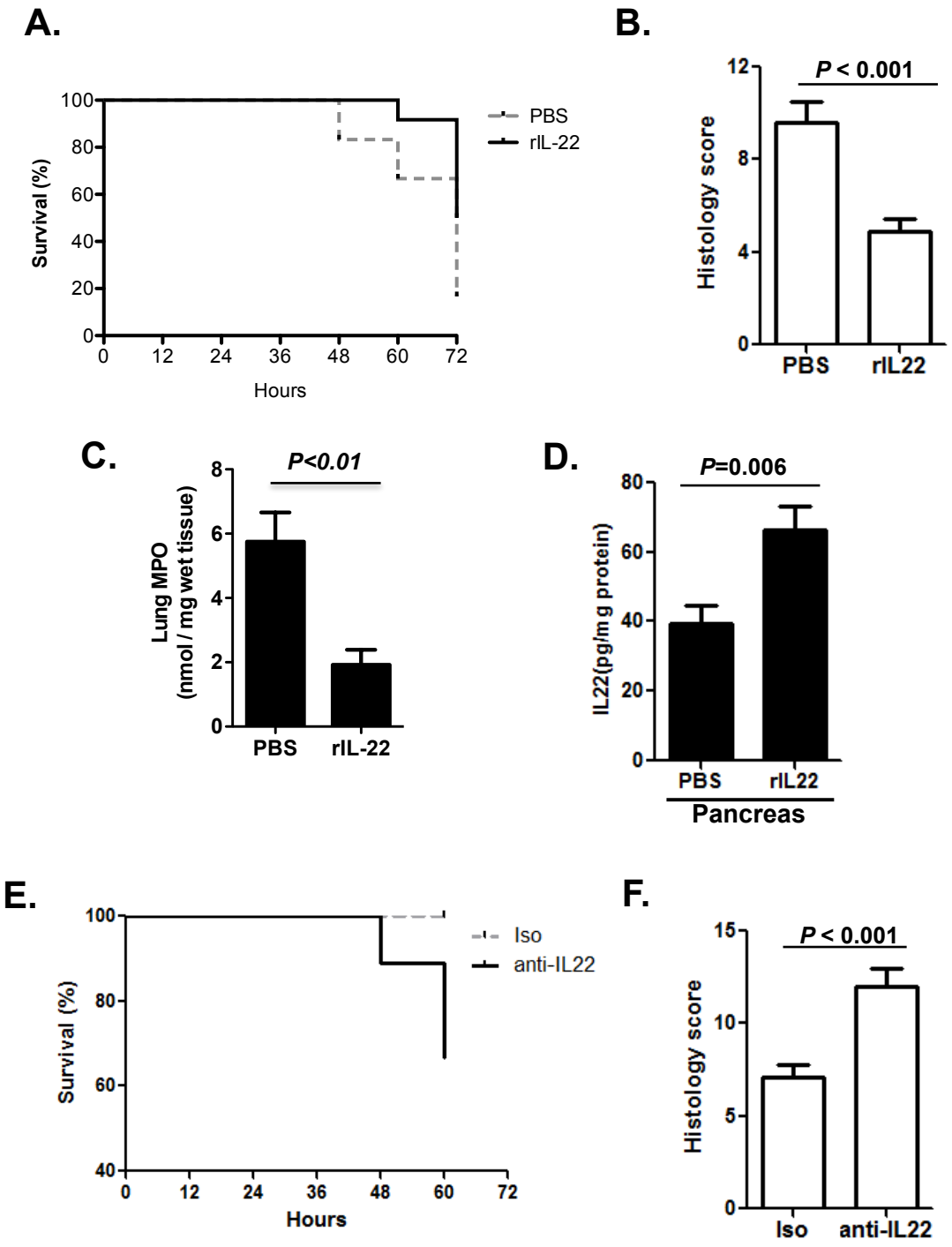

Fig S3. (A)) Balb/c mice were treated with rIL-22 or PBS at 24h after feeding CDE diet and sacrificed at 72h. Percent survival is shown for the two groups. (B) Balb/c mice were treated with rIL-22/PBS at 24h after CDE feeding and sacrificed at 60h. Pancreas histology scores and (C) Lung myeloperoxidase (MPO) activity results are shown as bar graphs. (D) Bar graph represents pancreas IL-22 protein levels at 60h following CDE feeding. (E,F) Balb/c mice were treated with anti-IL-22 mAb or isotype control (Iso) at 12 and 36h after feeding CDE diet, and sacrificed at 60h. Percent Survival (E) and pancreas histology scores (F) are shown. All data is presented as mean ± SEM of at least three independent experiments (n> 5 mice per group and per experiment).

Figure S4.

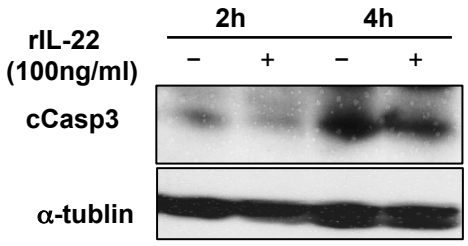

Fig S4. Primary pancreatic acinar cells isolated from naive mice were treated with vehicle (-) or 100ng/ml rIL-22 (+) for 2h or 4h *in vitro*. The cells were then lysed, proteins were separated by running in SDS/PAGE and then transferred into a membrane for western blotting. As shown cleaved Caspase-3 (cCasp3) and α-tublin were detected using specified antibodies.

Figure S5.

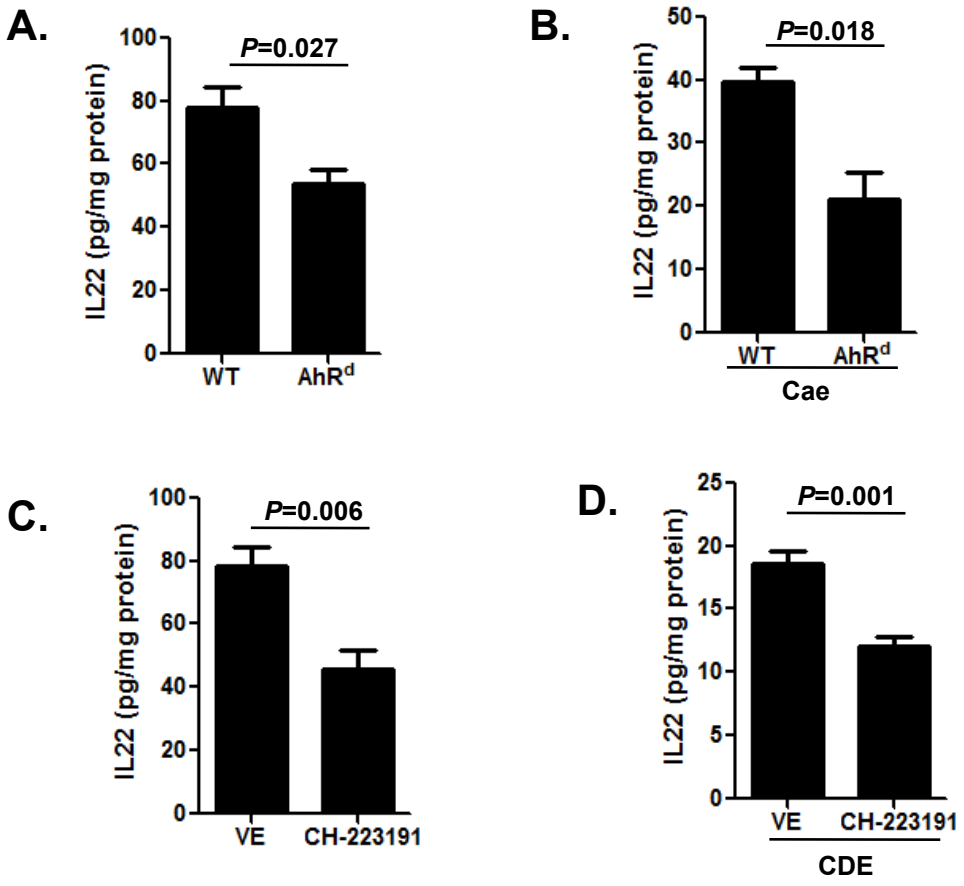

Fig S5. (A) Pancreata from C57/B6 wild-type (WT) and AhR^d were collected for IL-22 determination by ELISA assay. (B) C57BL/6 wild-type (WT) and AhR^d mice were treated with caerulein (Cae) to induce acute pancreatitis and pancreas IL-22 was determined by ELISA assay. (C) Balb/c mice were treated with vehicle control (VE) or AhR antagonist CH-223191 on day 1 and 2 (once per day, 100μg/mouse). Pancreata were then harvested at day 3 and used for IL-22 determination by ELISA assay. (D) Balb/c mice were treated with vehicle control (VE) or AhR antagonist CH-223191 daily for two days prior to initiation of CDE feeding. After 2 days of CDE feeding, pancreata were isolated for determination of IL-22 by ELISA. Data is presented as mean ± SEM or at least 3 independent experiments.

Figure S6.

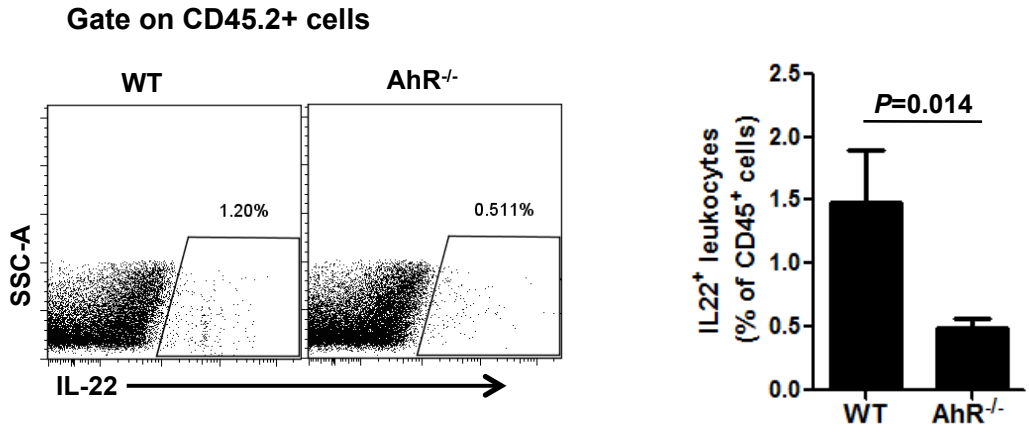

Fig S6. Pancreatic leukocytes were isolated from C57BL/6 wild-type (WT) and AhR$^{-/-}$ mice and analyzed for frequency of IL22+ cells by flow cytometry. Isolated cells were gated on live cells, leukocytes (CD45.2+) and then analyzed for frequency of IL-22+ cells.