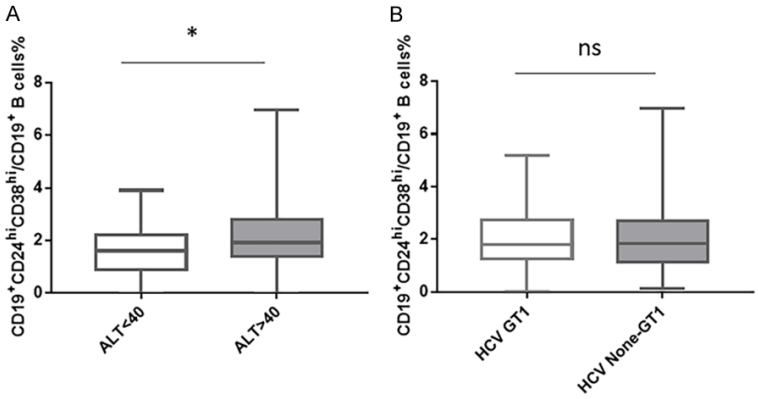
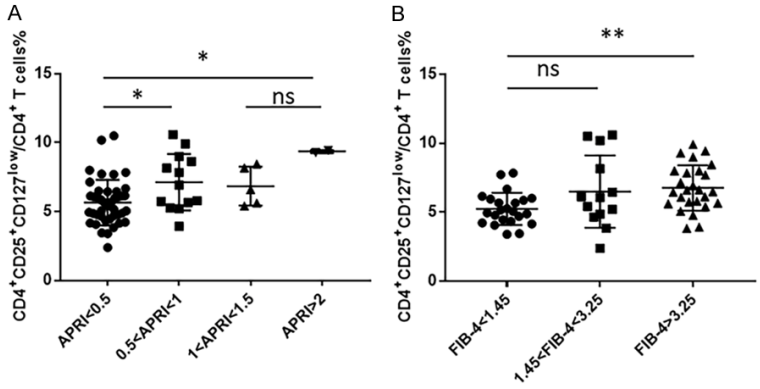
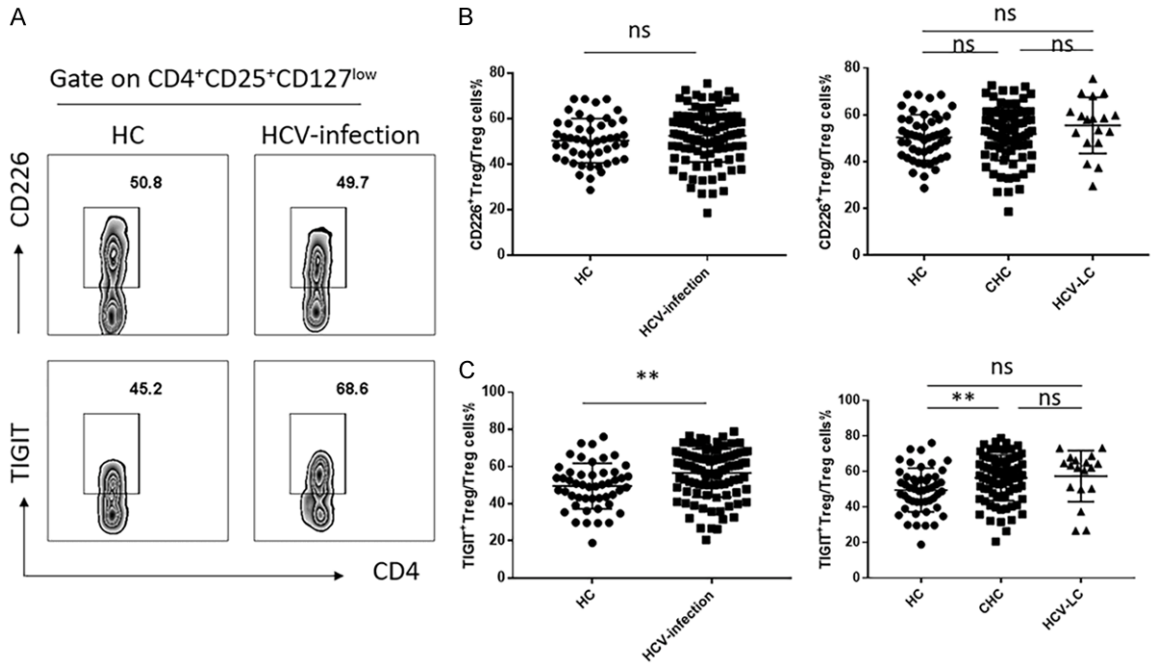


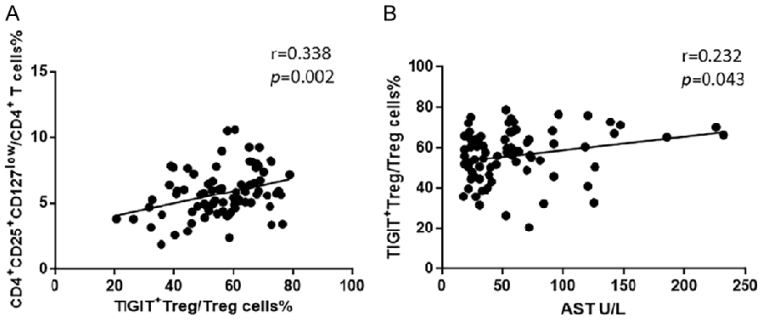
Supplementary Figure 1. A. The HCV genotype dose not influence the proportion $CD19^{+}CD24^{hi}CD38^{hi}$ regulatory B cells. The proportion of $CD19^{+}CD24^{hi}CD38^{hi}$ regulatory B cells between the ALT<40 U/L (1.603 ± 0.1931) and ALT>U/L (2.312 ± 0.1888) groups (N = 35 for ALT<40 and N = 64 for ALT>40). B. The proportion of $CD19^{+}CD24^{hi}CD38^{hi}$ regulatory B cells between HCV GT1 (2.012 ± 0.1841) and HCV none-GT1 (2.125 ± 0.2236) group (N = 52 for HCV GT1 and N = 47 for none-GT1). Statistical analyses were performed using t test. *: $P<0.05$, ns, not significant. (HCV GT1: HCV genotype 1, HCV None-GT1: HCV no genotype 1).



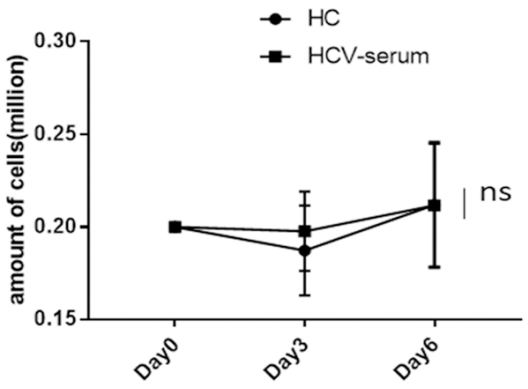
Supplementary Figure 2. Comparison of the percentages of $CD4^{+}CD25^{+}CD127^{low}$ regulatory T cells among different APRI or FIB-4 groups. A. The proportion of $CD4^{+}CD25^{+}CD127^{low}$ regulatory T cells in different groups according to the APRI index (the numbers of the four groups are 36, 13, 5 and 2). B. The proportion of $CD4^{+}CD25^{+}CD127^{low}$ regulatory T cells in different groups according to the FIB-4 scores (the numbers of the three groups are 23, 13 and 25). Statistical analyses were performed using one-way ANOVA. *: $P<0.05$, **: $P<0.01$, ns, not significant.



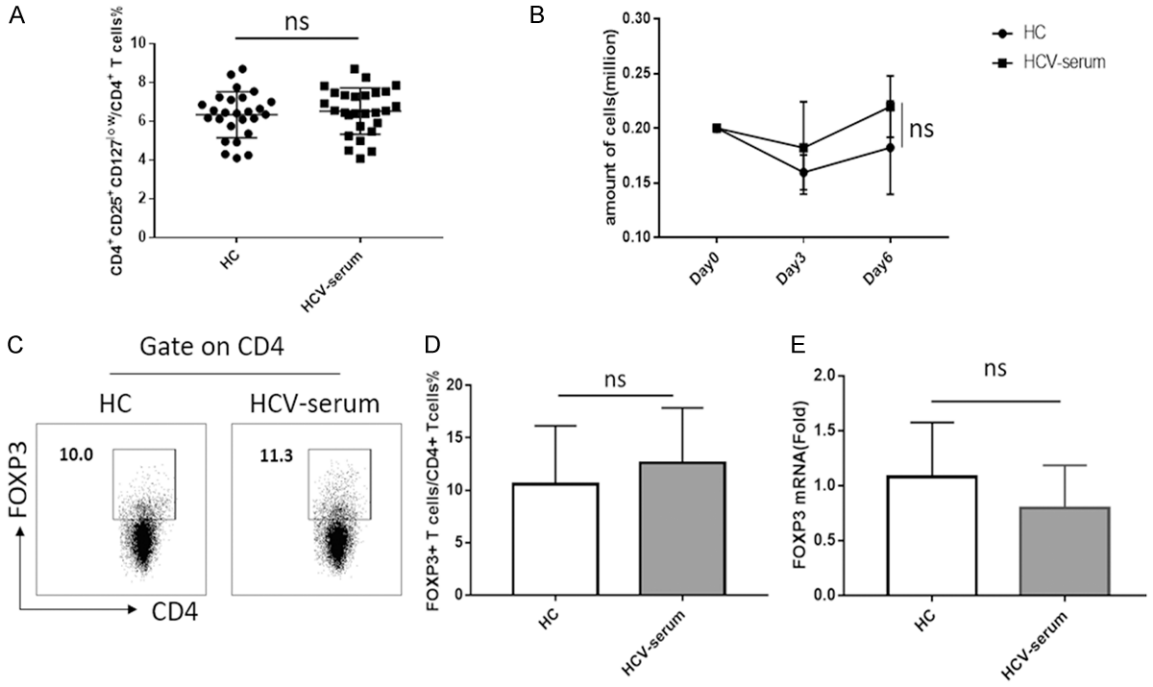
Supplementary Figure 3. TIGIT$^+$ Tregs increase in chronic HCV-infected patients. A. CD226 and TIGIT expression on peripheral blood CD4$^+$CD25$^+$CD127^{low} regulatory T cells was detected by flow cytometry. B. The expression levels of CD226 on Tregs were compared and analyzed. (left) HCV-infected patients and healthy controls groups (N = 47 for healthy controls and N = 99 for patients with HCV-infection), (right) chronic HCV patients and HCV liver cirrhosis patients, as well as healthy controls groups (the numbers of three groups are 47, 89, and 18). C. The expression levels of TIGIT on Tregs were compared and analyzed. (left) HCV-infected patients and healthy controls (N = 47 for healthy controls and N = 99 for patients with HCV-infection), (right) chronic HCV patients and HCV liver cirrhosis patients and healthy controls (the numbers of three groups are 47, 89, and 18). Statistical analyses were performed using t test (HCV-infection *versus* HC) and one-way ANOVA (CHC *versus* HCV-LC and HC). *: $P<0.05$, **: $P<0.01$, ns, not significant.



Supplementary Figure 4. TIGIT$^+$ Tregs have a positive correlation with Tregs and sera AST levels. (A) The expression of TIGIT on Tregs was positively correlated with the proportion of Tregs (r = 0.338, P = 0.002) (N = 68) and (B) sera AST levels (r = 0.232, p = 0.043) (N = 68). Linear regression analysis was performed.



Supplementary Figure 5. HCV sera does not amplify $CD19^+CD24^{hi}CD38^{hi}$ regulatory B cells *in vitro*. $CD19^+CD24^{hi}CD38^{hi}$ regulatory B cells were sorted from healthy subjects and stimulated with LPS (1 ug/ml) and CD40L (1 ug/ml) in the presence of healthy and HCV sera for days indicated in *vitro*. Total numbers in each well were counted in each time point. Values were Mean ± SEM of three separate experiments. Statistical analyses were performed using one-way ANOVA. ns, not significant.



Supplementary Figure 6. HCV serum neither expands nor induces the regulatory T cells. (A) PBMC isolated from healthy controls stimulated with anti-CD3/CD28 antibodies for 3 days under the HCV (N = 26) and control sera (N = 27). The percentages of $CD4^+CD25^+CD127^{low}$ cells were compared and analyzed. The t test was performed between two groups. (B) $CD4^+CD25^+CD127^{low}$ cells isolated from healthy subjects were stimulated with anti-CD3/CD28 coating beads and rhIL-2, rhTGF-β with healthy (HC) and HCV sera (HCV-serum) for days indicated and total cell numbers were counted. Statistical analyses were performed using one-way ANOVA. (C-E) The expression of FOXP3 from naïve T cells stimulated with CD3/CD28 coating beads and rhIL-2, rhTGF-β in the presence of healthy and HCV sera for 3 days, (C) is representative of flow analysis. (D, E) indicate Foxp3 protein and mRNA levels. Values were Mean ± SEM of three independent experiments. Statistical analyses were performed using t test. ns, not significant.