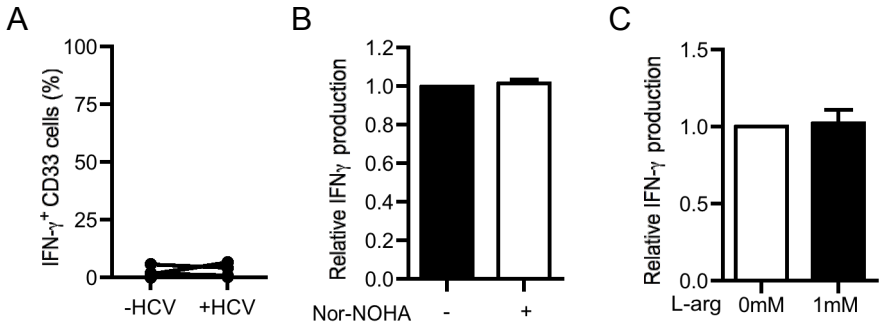

Figure S1. IFN-γ production by CD33$^+$ cells is negligible and unaffected in NK cells cultured with mock-conditioned CD33$^+$ cells treated with an arginase-1 inhibitor or arginine. Mock- or HCV-conditioned CD33$^+$ cells were cultured with autologous NK cells for 2 days. Adherent cells were treated with detachin and cultured with IL-2/IL-12/IL-18. (A) Restimulated cultures were treated with Golgi stop for 5h and IFN-γ was detected in CD33$^+$ cells by intracellular γ staining. (B and C) Mock-conditioned CD33$^+$ cells were co-cultured with autologous NK cells for 2 days, and stimulated with IL-2/IL-12/IL-18 in the presence of (B) 0.5 mM Nor-NOHA or (C) 1mM L-arginine. IFN-γ was detected in culture supernatants by ELISA. Results are mean of 4 independent experiments.

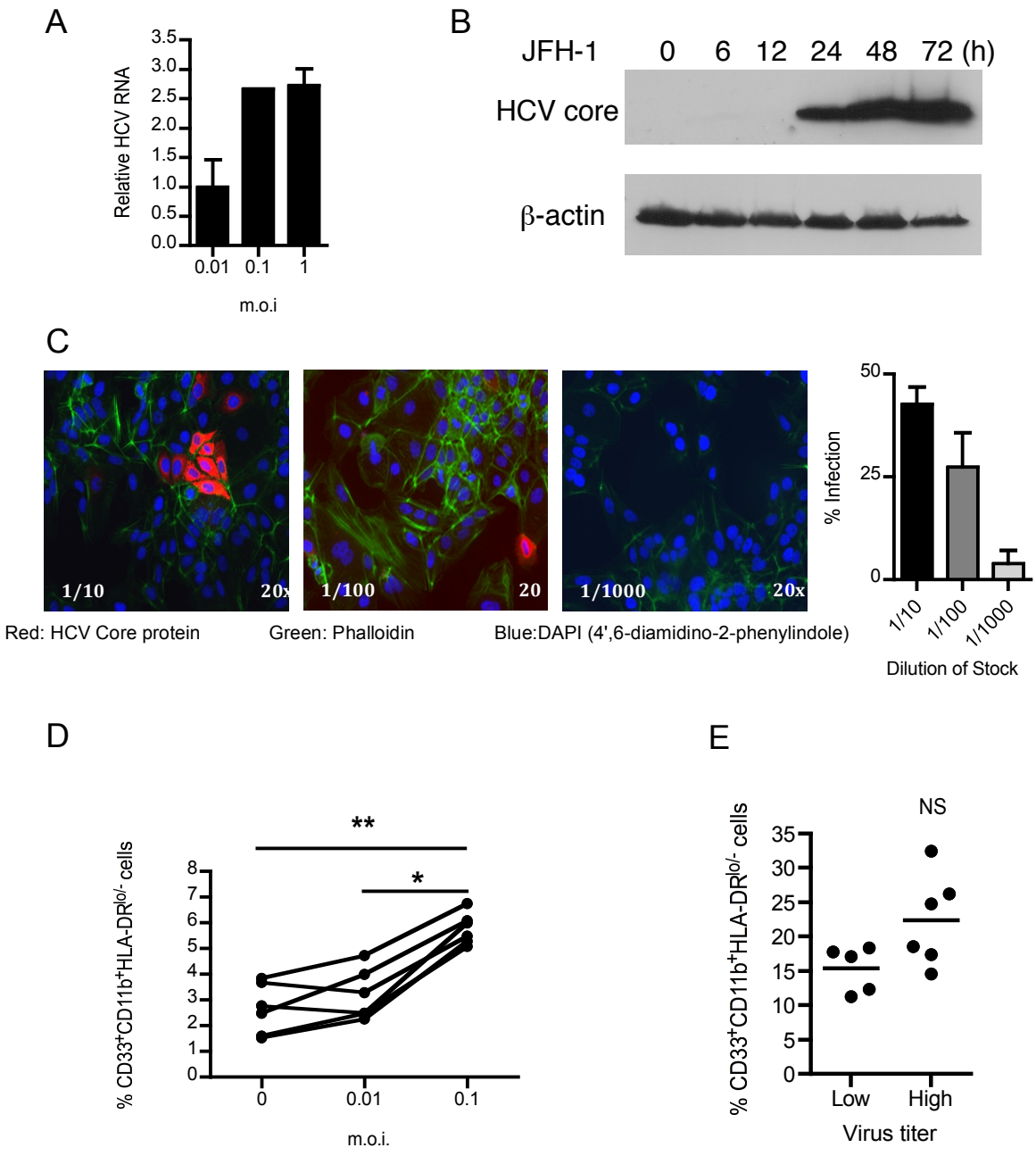

Figure S2. HCV-infected hepatocytes induce the accumulation of MDSCs in virus dose-dependent manner. (A) Huh7.5.1 cells were infected with JFH-1 at various m.o.i. Cells were collected at day 4 post-infection for qRT-PCR analysis to detect HCV RNA.

(B) JFH-1-infected Huh7.5.1 cells at various time points were examined to detect intracellular core protein by immunoblotting. (C) Huh-7.5.1 cells grown on cover slips were infected with 3 dilutions of the sucrose-purified virus stock to achieve a level of infection to calculate the percentage of total infected cells. The level of HCV infection was determined 3 days post infection by immunofluorescence staining for HCV Core. Total number of cells and infected (HCV-core^{+}) cells are counted in 6 random fields to calculate the % infection (total cell number / infected cell number). (D) PBMCs were cultured with uninfected or HCV-infected (0.01 or 0.1 m.o.i) Huh7.5.1 cells for 7 days and CD45^{+} cells were then positively selected by magnetic separation. MDSCs were defined as CD33^{+}CD11b^{+}HLA-DR^{lo} gated on forward and side scatter, live cells, HLA-DR^{lo}, CD33 and CD11b. The percentages of MDSCs were plotted. Each line represents data from the same donor. *p<0.05, **p<0.01, Kruskal-Wallis test (One-way ANOVA) with Dunn's post-test, as appropriate (E) Patients were divided in to two groups: high virus titer (>800,000IU/mL) and low virus titer (<800,00IU/mL). PBMCs from chronic HCV patients were stained for MDSCs described as above. The percentages of MDSCs were plotted. ns denotes not significant, Mann Whitney two-tailed test.

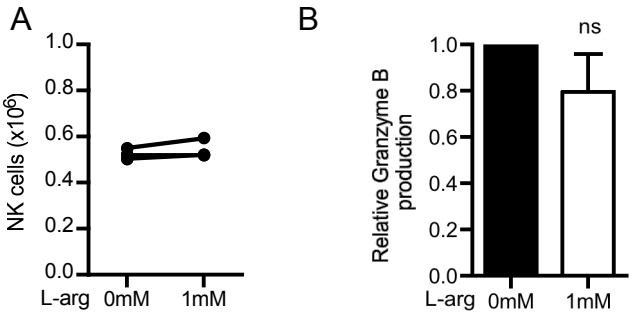

Figure S3. NK cell viability and granzyme B production are unaffected by L-arginine availability. NK cells were grown in complete media or L-arginine-deficient media and were stimulated with IL-12/IL-18 for 2 days. (A) Cell viability was assessed by flow cytometry. (B) Granzyme B in the supernatant was measured by ELISA. Results are representative or mean of 3-6 independent experiments. ns denotes not significant, two-tailed paired *t* test.

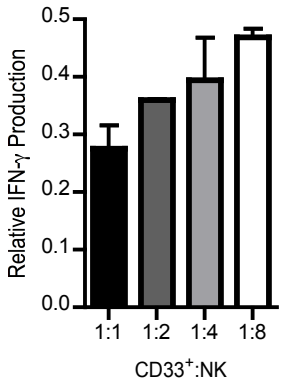

Figure S4. Increased CD33$^+$ cells to NK cell ratio correlates positively with suppressive effects. Uninfected- or HCV-conditioned CD33$^+$ cells were cultured with autologous NK cells at the ratios of 1:1, 1:2, 1:4, and 1:8. The cells were stimulated with IL-12/IL-18 for 2 days. Cell culture supernatants were recovered and IFN-γ production was measured by ELISA. The IFN-γ production was normalized to the corresponding uninfected-conditioned sample. Results are mean of 3 independent experiments.