Supplementary Figure 1. αPD-1-FITC (clone M1H4) defines a highly PD-1+ CD8 T-cell subset in comparison to αPD-1-PE (clone EH12). (A) Upper histograms show staining characteristics for CD8 T-cells stained with anti-PD-1-FITC (clone M1H4; **green line**) used in this study, relative isotype control stained lymphocytes (gray shaded area) in 4 HCV-seropositive subjects (Pts 1-4). The cutoff for PD-1-positivity was determined based on isotype controls (>99.5%) for anti-PD-1-FITC. Lower histograms showing an overlay of gated PD-1-FITC+ CD8 T-cells onto CD8 T-cells co-stained with anti-PD-1-PE (clone EH12; **red shaded area**) indicate that they correspond to PD-1high cells. **(B)** Anti-PD-1 PE staining characteristics of gated HCV tetramer+ CD8 T-cells positive for anti-PD-1-FITC (red dots) are shown as an overlay (left graphs) using samples co-stained with anti-PD-1 FITC (M1H4), anti-PD-1 PE (EH12), CD8 PerCP and tetramer APC**.** The gated PD-1 FITC+ tetramer+ CD8 T-cells (red dots the overlay) indicate that they are highly positive for PD-1 expression per anti-PD-1 PE (EH12 clone). Middle graph for each subject shows the anti-PD-1 FITC and tetramer staining for CD8 T-cells with the gating strategy for PD-1+ tetramer+ cells (red square) in the overlay. Right graph for each subject shows the anti-PD-1 PE and tetramer staining for gated CD8 T-cells. Bottom graphs shows the isotype staining and gating strategy to define PD-1 positivity (99.5% negative for isotype).

Supplementary Figure 2, Additional APC could not enhance the effect of PD-L1 blockade on intrahepatic HCV-specific T cells. 20 million PBL from an HLA-A2+ transplant recipient (T65) were depleted of CD3+ cells by Dynabeads (Dynal Inc). The resulting CD3-depleted antigen presenting cells were added to PBL or LIL being stimulated for 7 days in vitro with HCV peptides and rIL2 +/- anti-PDL1 as described in Methods. For each stimulation condition (2

million PBL or LIL per condition), 1 million CD3-depleted PBLs were added. On day7, the frequency of HCV NS3 1073 specific CD8 T-cells with perforin expression as well as the frequency of IFNγ+CD8 T cells were examined by intracellular staining.