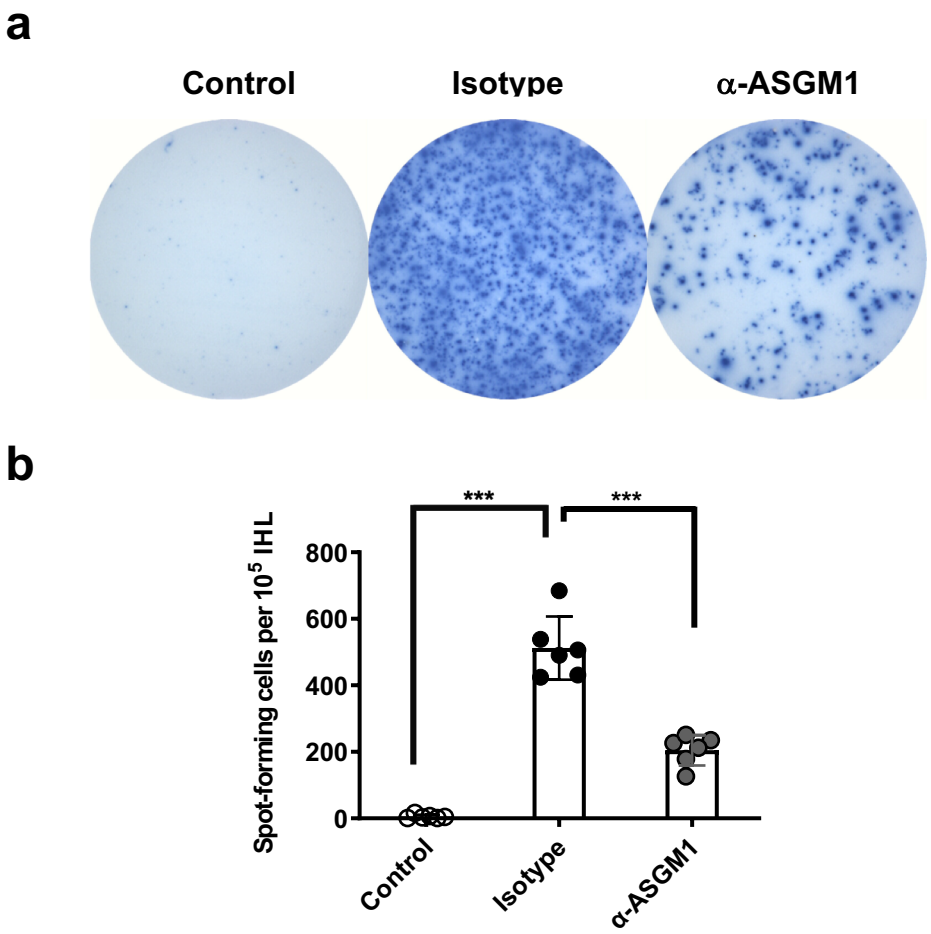


Figure. S1 In NFIL3 KO mice, α-ASGM1 treatment led to decrease interferon-gamma (IFN-γ) response in HBc-specific CD8 T cells..

(a) Intrahepatic leukocytes (IHLs) were isolated from naïve (Control) and HBV transfected NFIL3 KO mice treated with isotype (Isotype) or anti-ASGM1 (a-ASGM1) for 24 hours on day 10 after hydrodynamic injection with HBV DNA. CD8 T cells of each group from HBV transfected mice were enriched by magnetic beads and mixed with naïve IHL in a ratio of 1:7. Cells were restimulated with $HBcAg_{18\text{-}27}$ and $HBcAg_{93\text{-}100}$ peptides for 18 hours. Peptide-activated interferon gamma (IFN-γ) responses were analyzed by a ELISPOT assay. (b) The frequency of peptide-activated IFN-γ secretion was quantified as spot-forming cells per 1×10^5 cells *P < 0.05, **P < 0.01, ***P < 0.001 between selected relevant comparisons, one-tailed unpaired Student's t-test. IHL, intrahepatic leukocytes; SPL, splenocytes.

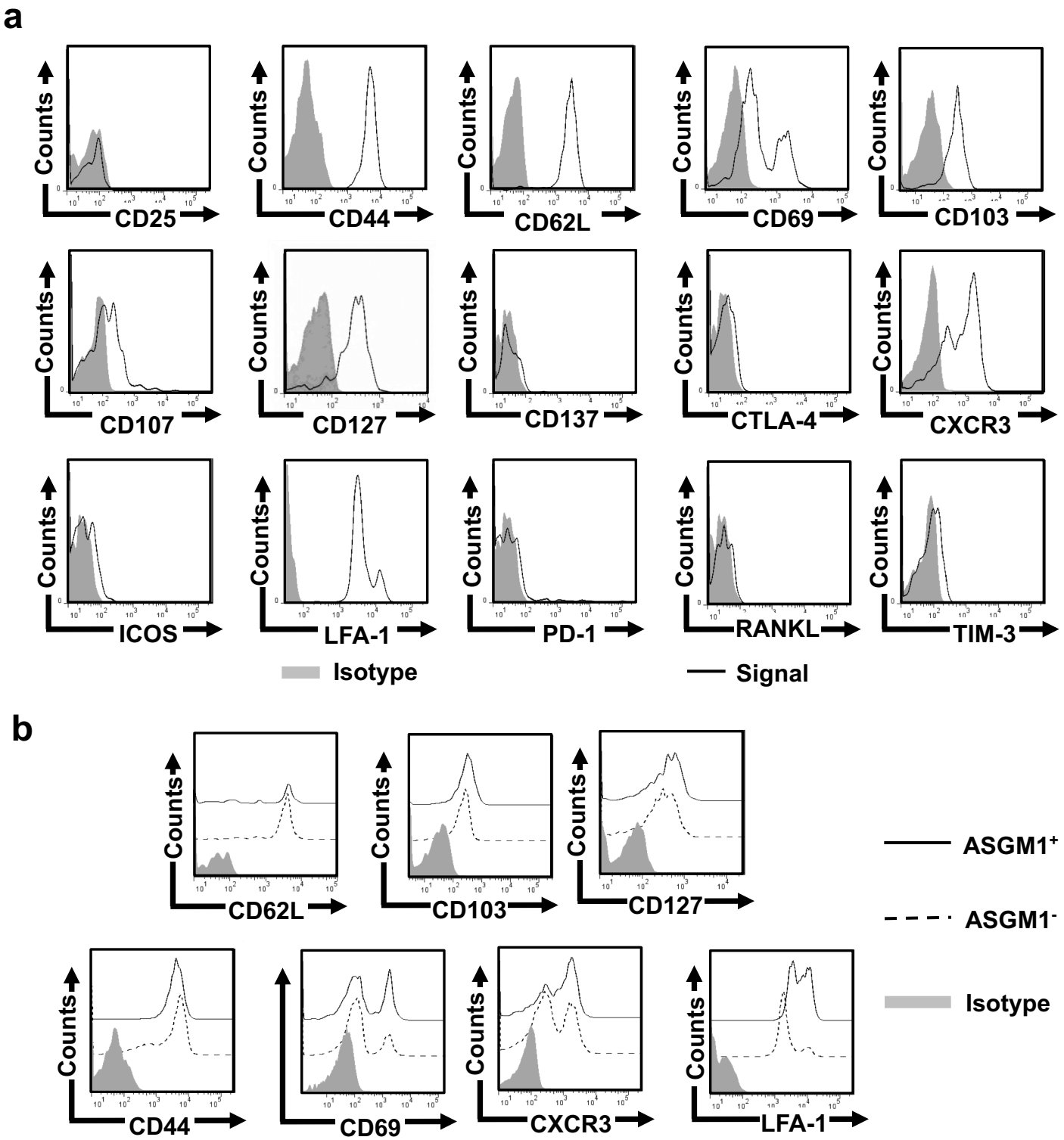


Figure. S2. ASGM1$^+$ CD8 T cells expressed more CD44, CD69, CXCR3 and LFA-1 but not other phenotypic markers than ASGM1$^-$ CD8 T cells.

(a) Intrahepatic leukocytes (IHLs) from naïve NFIL3 KO mice were isolated and a panel of phenotypical markers of ASGM1$^+$ CD8 T lymphocytes were analyzed by flow cytometry. (b) The comparison of CD44, CD62L, CD69, CD103, CD127, CXCR3 and LFA-1 expression between ASGM1$^-$ and ASGM1$^+$ CD8 T cells were analyzed. Data are representative of three independent experiments .

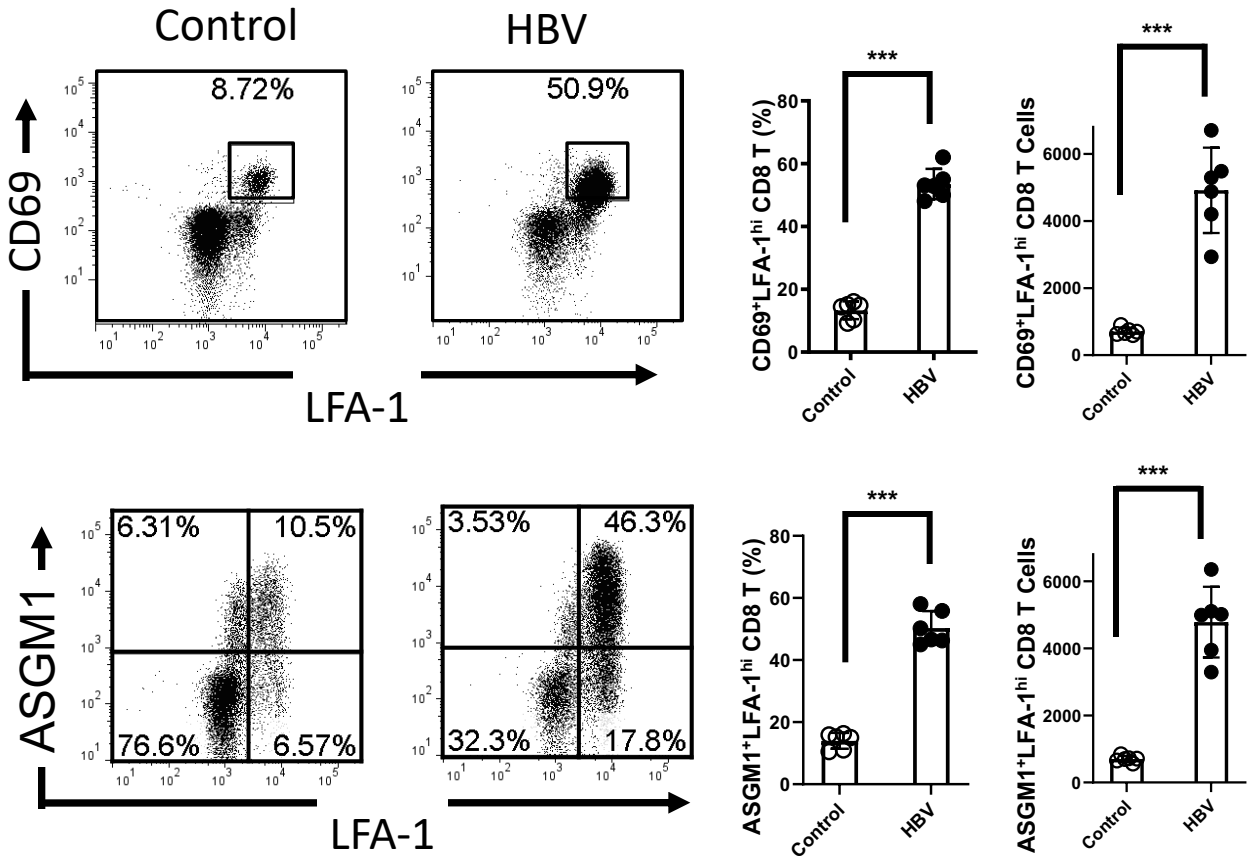
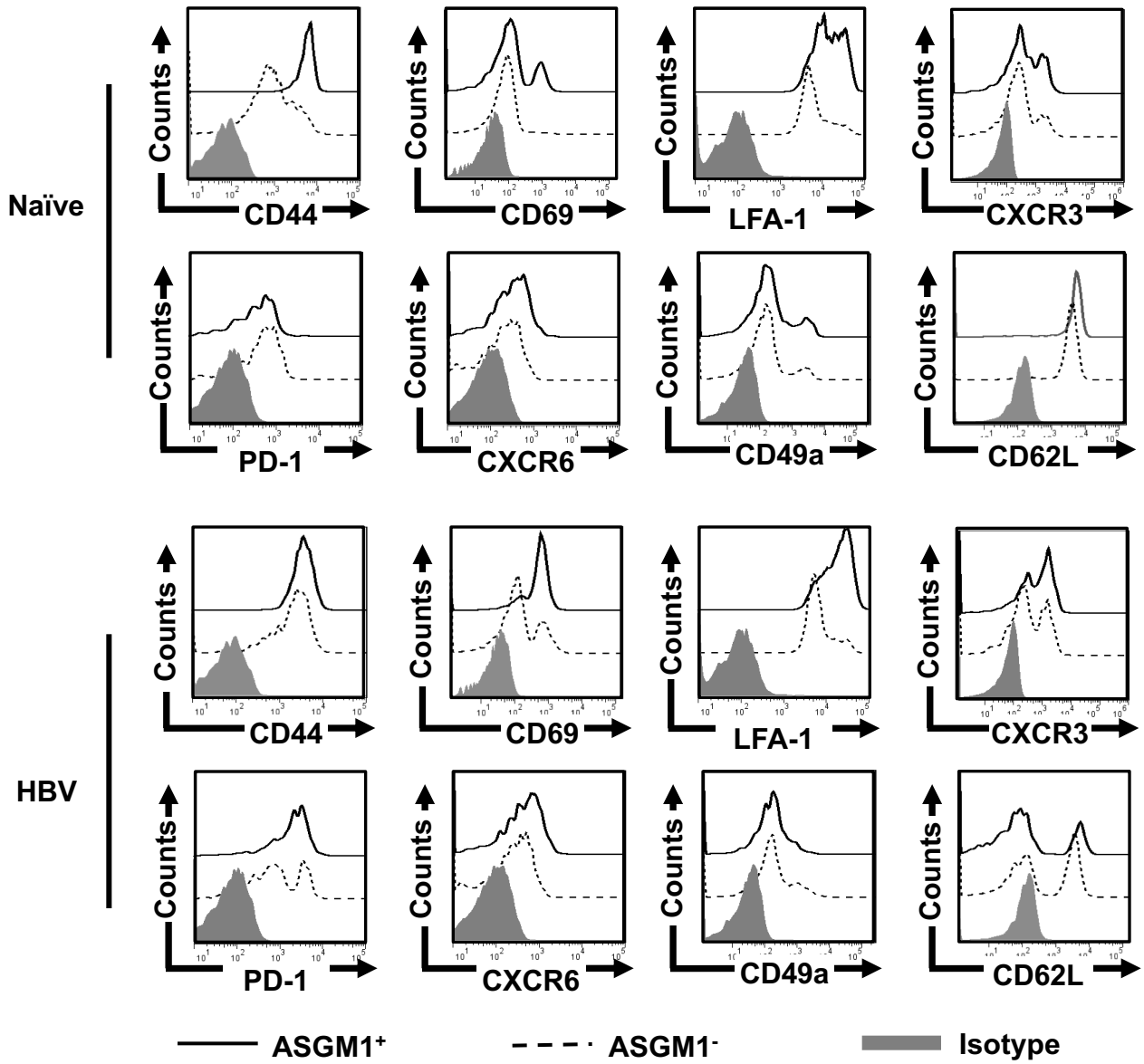


Figure. S3. The intrahepatic ASGM1^{+} LFA-1^{hi} CD8 T cells increased after mice were HDI with HBV DNA.

Intrahepatic leukocytes (IHLs) from mice 14 days after HDI with DPBS/HBV DNA were isolated. Cells were stained and analyzed by flow cytometry.


Naïve
HBV
Counts
CD44
CD69
LFA-1
CXCR3
PD-1
CXCR6
CD49a
CD62L
ASGM1+
ASGM1-
Isotype

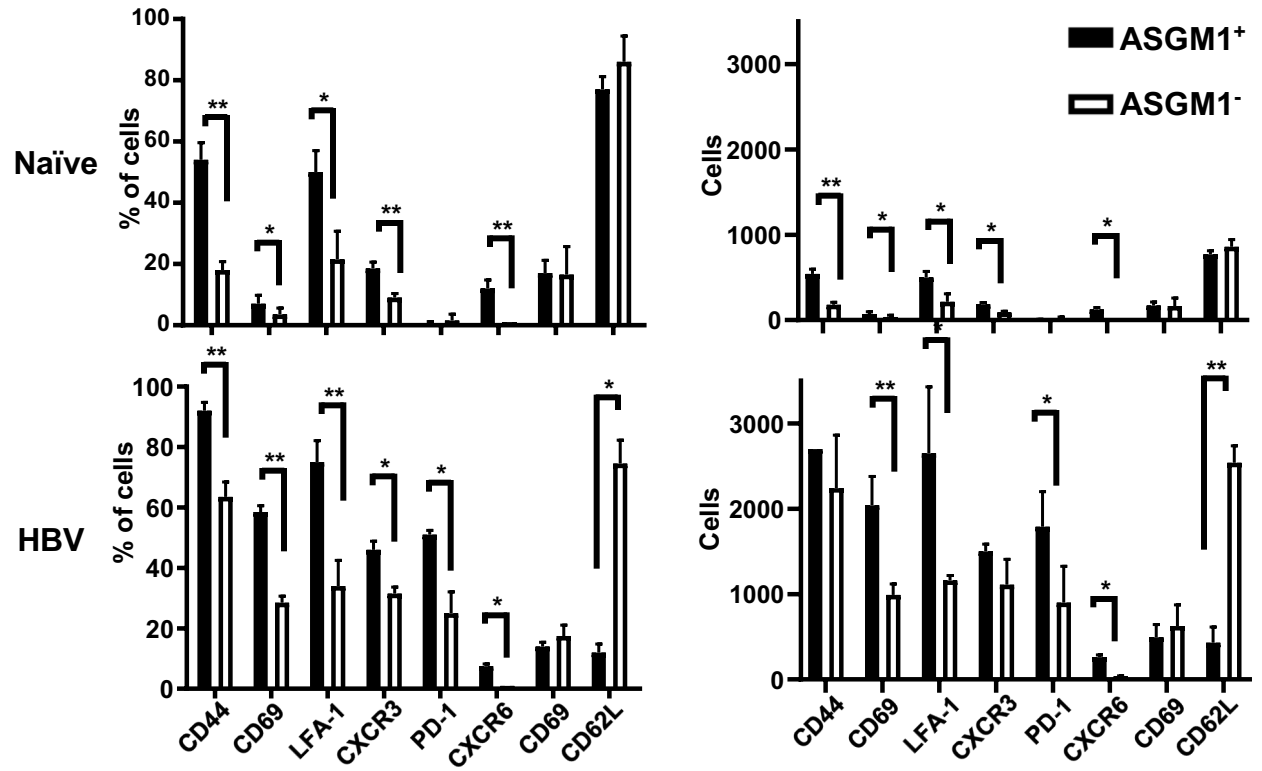

Naïve
HBV
% of cells
Cells
ASGM1+
ASGM1-
CD44
CD69
LFA-1
CXCR3
PD-1
CXCR6
CD69
CD62L

Figure. S4. ASGM1^{+}CD44^{+}LFA^{hi} CD8 T cells were phenotypically liver-resident in not only naïve but also HBV transfected mice.

Intrahepatic leukocytes from naïve or HBV transfected NFIL3 KO mice were isolated and the comparison of CD44, CD69, LFA-1, CXCR3, PD-1, CXCR6, CD49a and CD62L expression between ASGM1^{-} and ASGM1^{+} CD8 T cells were analyzed.