

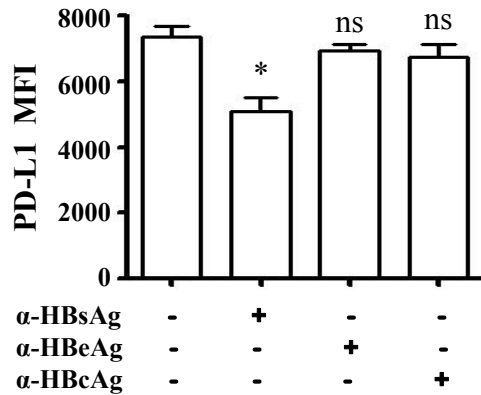
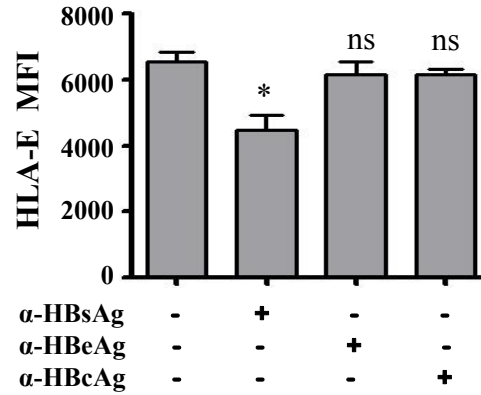
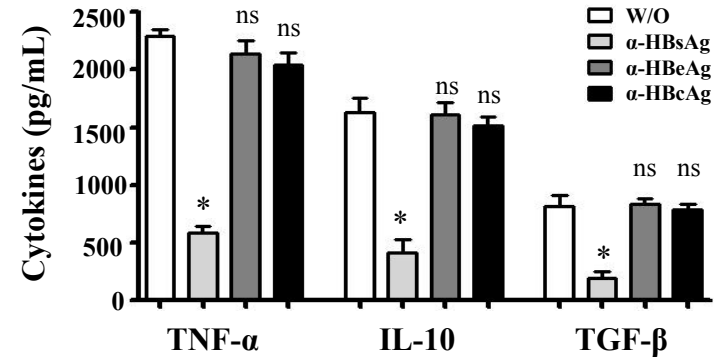
Supplementary Table 1. Characteristics of hepatitis B patients and healthy controls

Clinical data	Chronic HBV infected patients (n=35)	Healthy controls (n=35)
Age (years) (Mean $\pm$ SD)	55 $\pm$ 20	35 $\pm$ 10
Gender(Male/Female)	21/14	20/15
HBeAg (+/-)	35/0	0/35
HBeAb (+/-)	0/35	0/35
HBsAg ( $\mu$ g/mL)	3.86 $\pm$ 1.14	—
ALT (IU/L)	28 $\pm$ 15	30 $\pm$ 12
AST (IU/L)	32 $\pm$ 14	24 $\pm$ 8
HBV DNA level (lg IU/ml)	8.6 $\pm$ 1.3	—

Abbreviations: ----: not applicable; SEM: standard error of mean

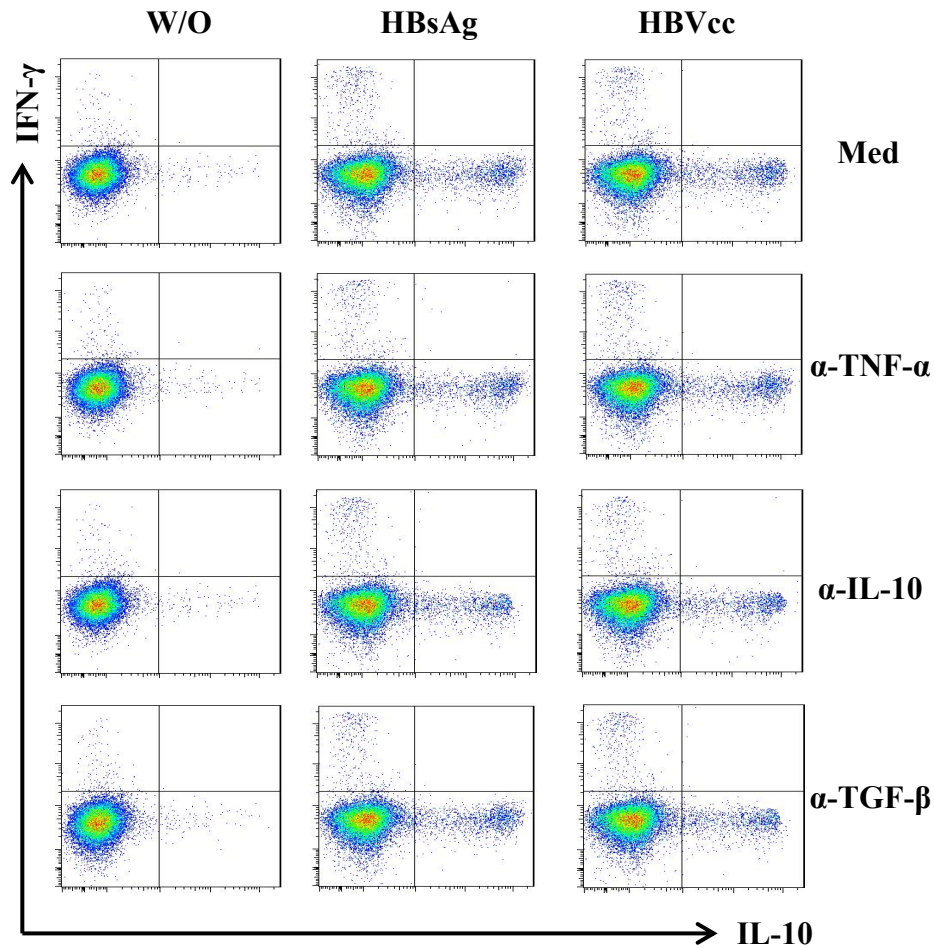
Supplementary Table 2: primers sequences for quantitative real-time PCR

genes	Forward primer	Reverse primer
GAPDH	CGGATTTGGTCGTATTGGG	TCTCGCTCCTGGAAGATGG
TNF- $\alpha$	ATCCTGGGGGACCCAATGTA	AAAAGAAGGCACAGAGGCCA
IL-10	GGCACCCAGTCTGAGAACAG	ACTCTG CTGAAGGCATCTCG
TGF- $\beta$	GACTACTACGCCAAGGAGGTC	GAGAGCAACACGGGTGAG
MyD88	CTGCCTCCTCCTTTCGTTGTAG	GCTCTGCTGGTCCTTCTTAGTC
NF $\kappa$ B1	TGGGCTACACCGAAGCAAT	GGGCTGAGAGGTGGTCTT
TLR2	ATCCTCCAATCAGGCTTCTCT	GGACAGGTCAAGGCTTTTTACA
TLR3	TTGCCTTGTATCTACTTTTGGGG	TCAACACTGTTATGTTTGTGGGT
iNOS	GAGGAGCAGGTCGAGGACTAT	TCTTCGCCTCGTAAGGAAATAC
Arg1	GTTTCTCAAGCAGACCAGCC	GCTCAAGTGCAGCAAAGAGA
IDO1	CAAATCCACGATCATGTGAACC	AGAACCCTTCATACACCAGAC
IL-12	AACTTGCAGCTGAAGCCATT	AGGGTACTCCCAGCTGACCT
T-bet	GTGACCCAGATGATTGTGCTC	GTAGGCAGTCACGGCAATG
IL-18	GTTGCAGAAAGTGTA AAAATT ATTAC	TAA CCT CAT TCA GGA CTT CC

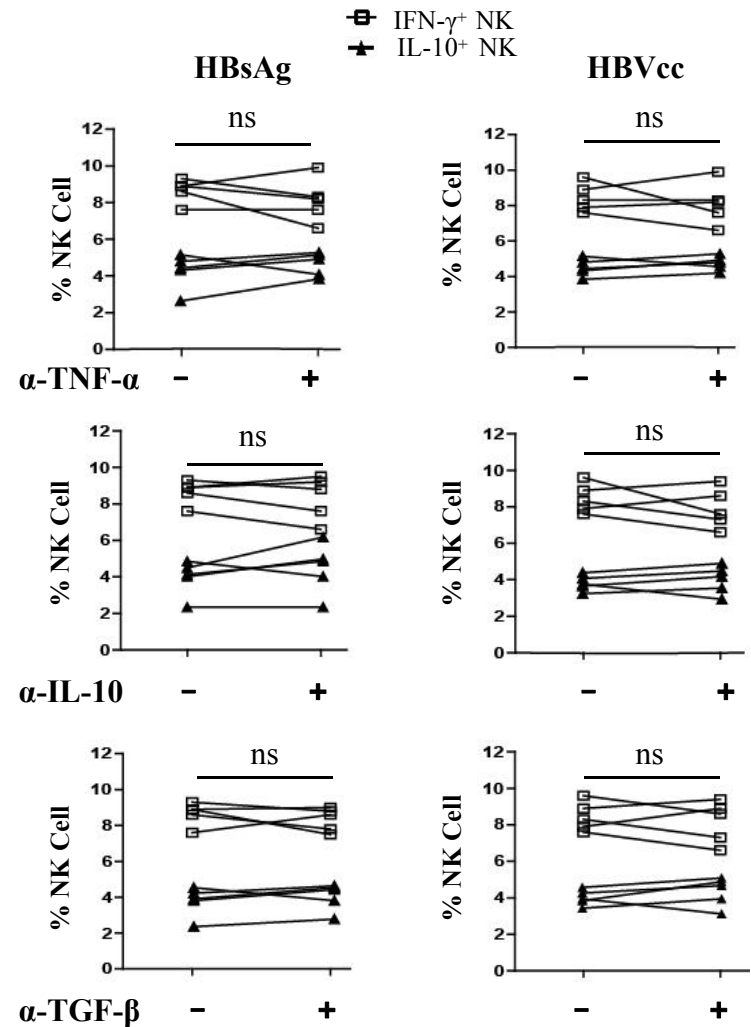
**A****B****C**

**Supplementary Figure 1: HBV induce immunosuppressive monocytes by employing HBsAg, not HBeAg and HBcAg.** Purified monocytes from healthy donors (n= 5) were stimulated with HBVcc for 24 hours in the presence of HBsAb, HBeAb or HBcAb respectively. HBsAb, but not HBeAb or HBcAb inhibited HBV-induced PD-L1 (A) and HLA-E (B) expression, and cytokines secretion (C). The error bars represent standard error of the mean. \* p<0.05, ns: no significance.

A



B



**Supplementary Figure 2: Neutralization of IL-10, TNF- $\alpha$  and TGF- $\beta$  had no significant effect on NK cell activation via HBV-treated monocytes.** Purified monocytes and NK cells were co-cultured for 24 hours with HBsAg (10 $\mu$ g/mL) or HBVcc (10<sup>7</sup>copies/mL) in presence of IL-10, TNF- $\alpha$  and TGF- $\beta$  antibodies. NK cells were identified by CD3 and CD56 staining, and the expression of IL-10 and IFN- $\gamma$  were examined by intracellular cytokine staining. (A) A representative of five independent experiments is shown. (B) Statistical analysis for the expression of IL-10 and IFN- $\gamma$  on NK cells. ns: no significance.