FIGURES

Figure 1 **HBc-specific (A) and HBs-specific (B) CD8$^+$ T-cell responses 14 days after primary immunization with ChAd155-HBV(with and without hli) and 7 days after MVA-HBV booster immunization (individual animals with medians are represented)**

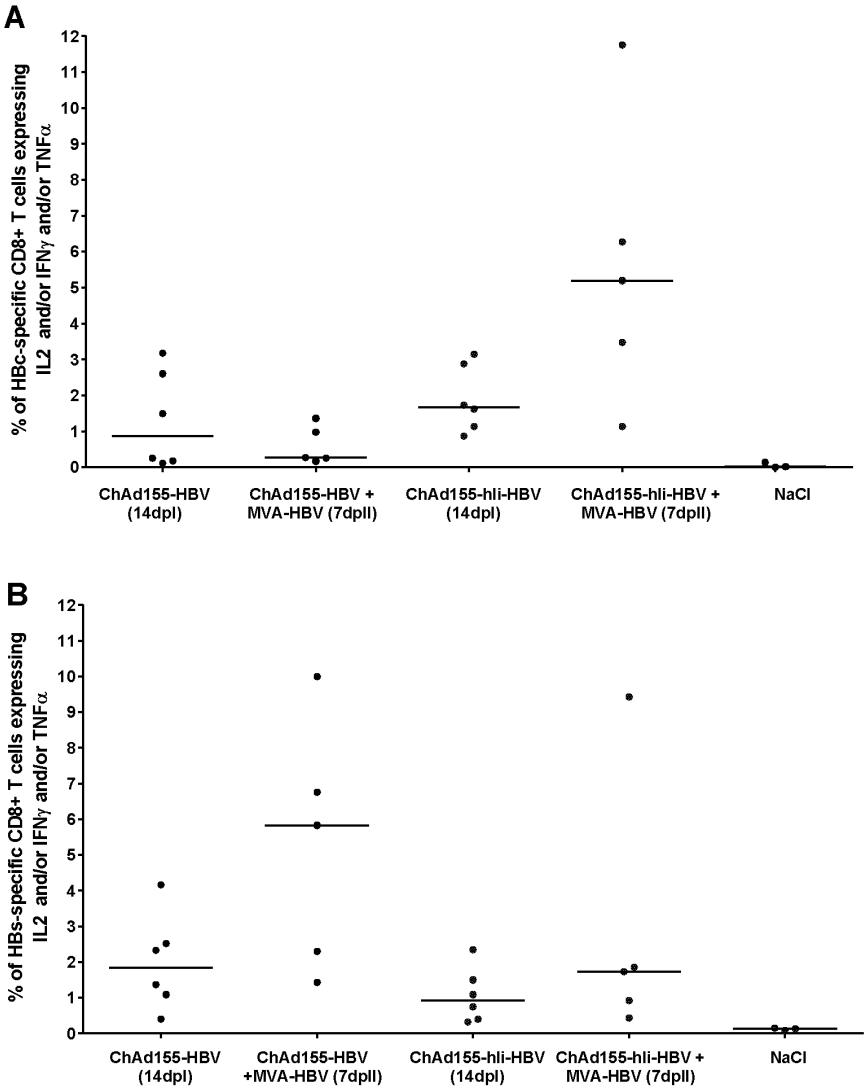


Figure 2 **HBc-specific antibody responses 14 days after primary immunization with ChAd155-HBV (with and without hli) and 7 days after MVA-HBV booster immunization (individual animals with geomean titers (GMT) are represented)**

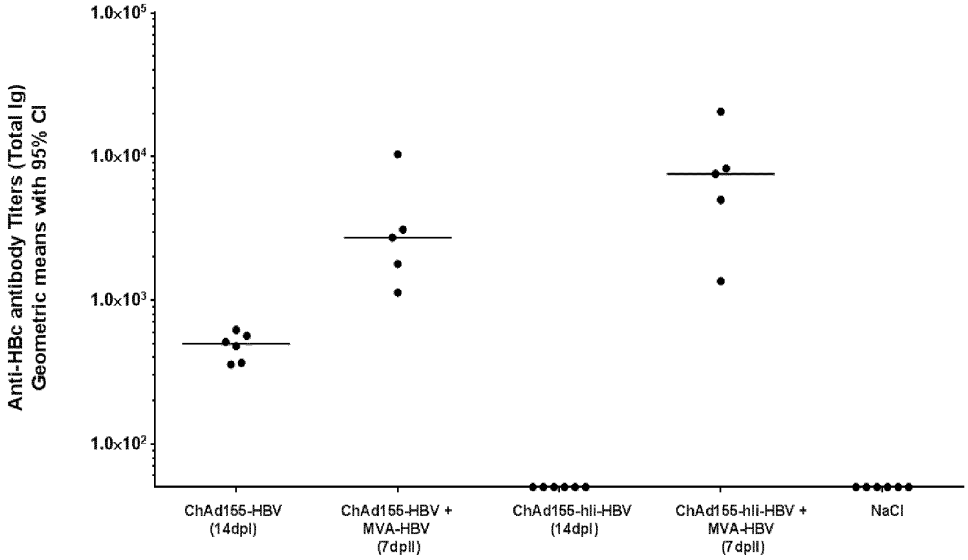


Figure 3 **HBc and HBs-specific $CD4^+$ T-cell responses at 7 days post-third dose (pools of 5 animals/group with medians are represented)**

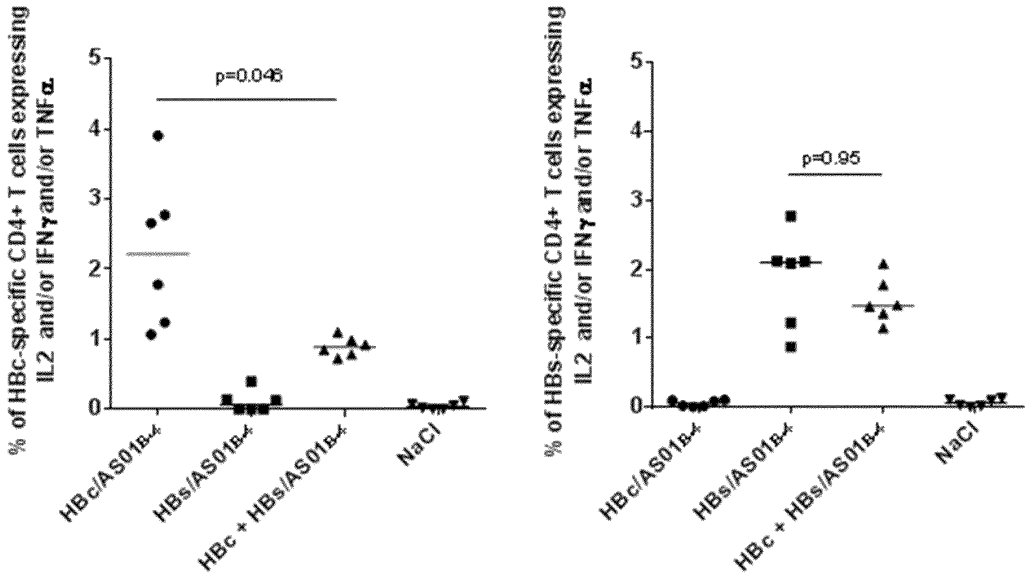


Figure 4 HBs specific CD8+ T-cell response at 7 days post-third dose (pools of 5 animals/group with medians are represented)

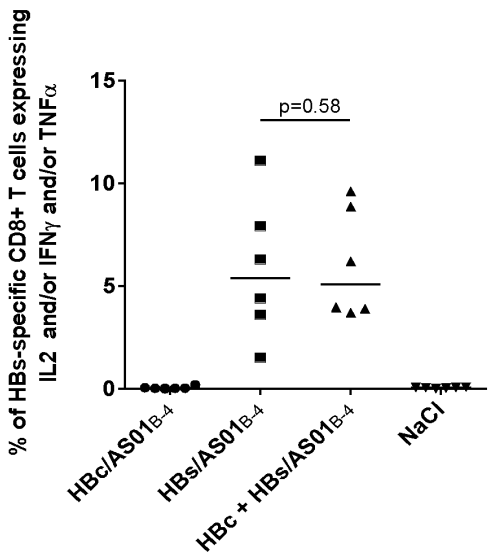
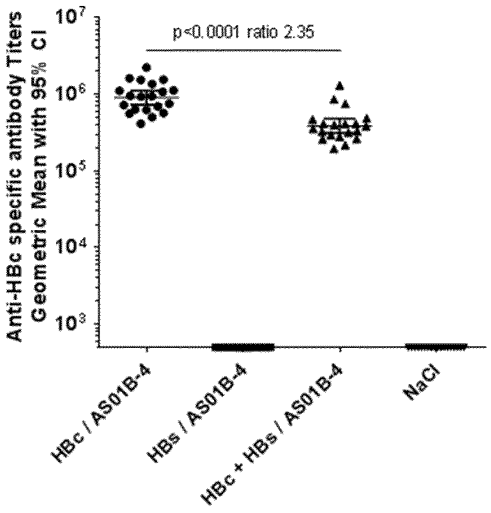


Figure 5 Anti-HBc and anti-HBs antibody responses at 14 days post-third dose (individual animals with geomeans and 95%CI are represented)



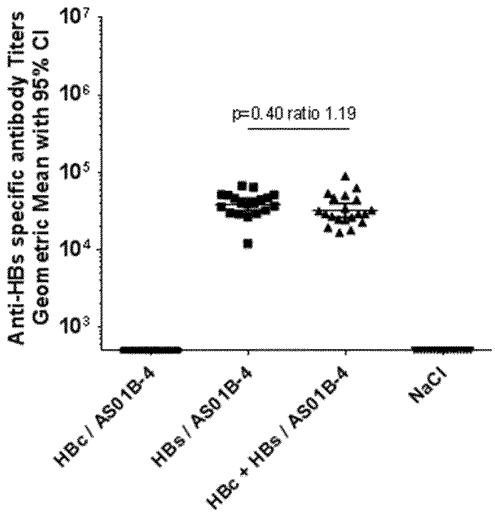


Figure 6 HBs- (A) and HBc- (B) specific CD4+ and HBs-specific CD8+ (C) T-cell responses at 7 days post-third dose (pools of 5 animals/group with medians are represented)

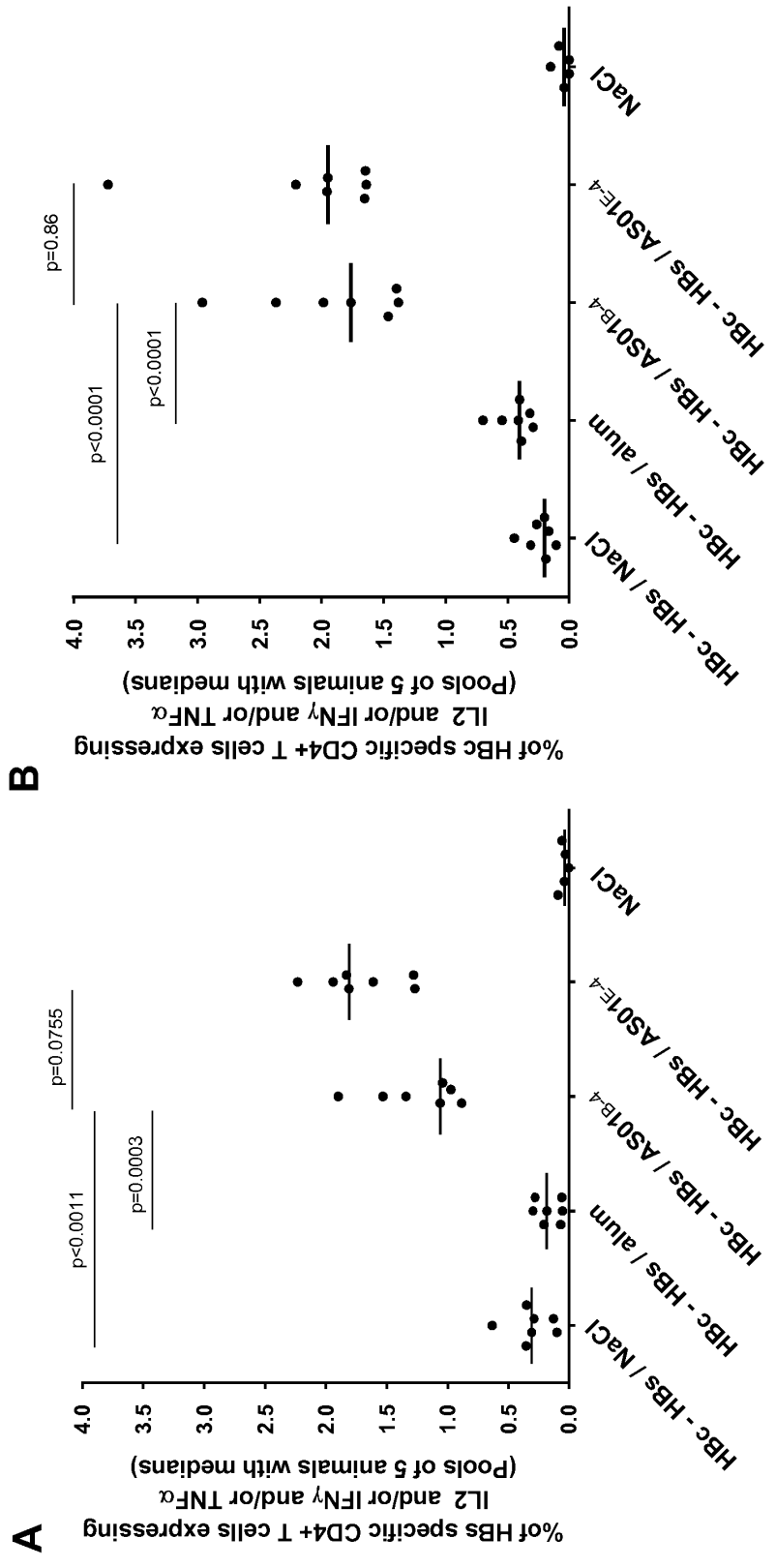
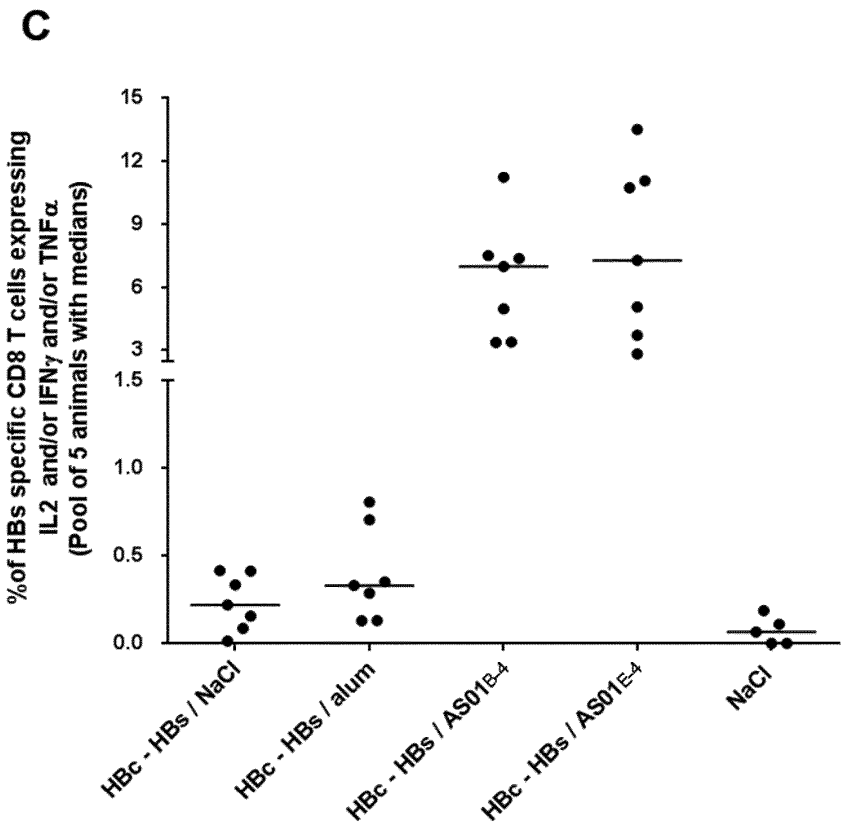


Figure 6 cont'd HBs- (A) and HBc- (B) specific CD4+ and HBs-specific CD8+ (C) T-cell responses at 7 days post-third dose (pools of 5 animals/group with medians are represented)



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Figure 7 HBs- (A) and HBc- (B) specific antibody responses at 14 dpIII (individual animals with geomeans and 95%CI are represented)

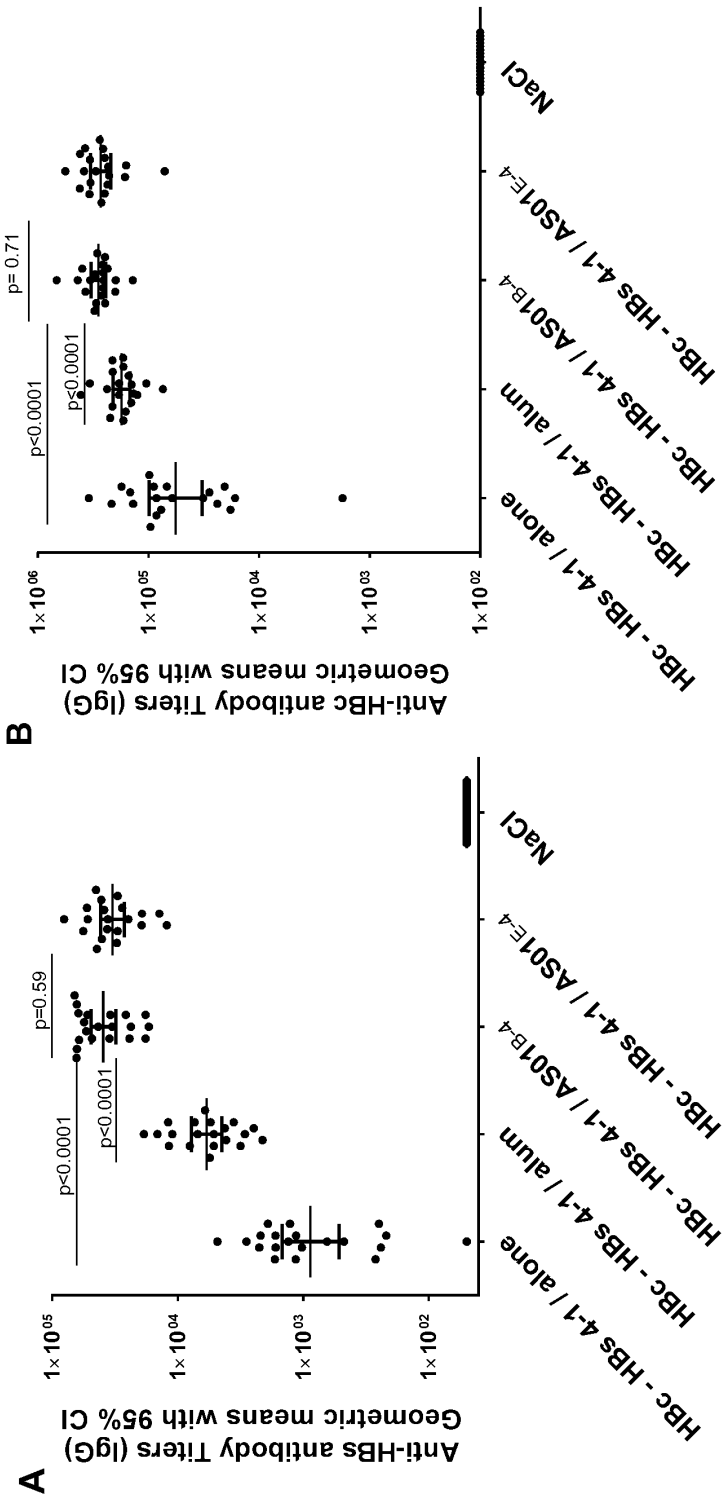
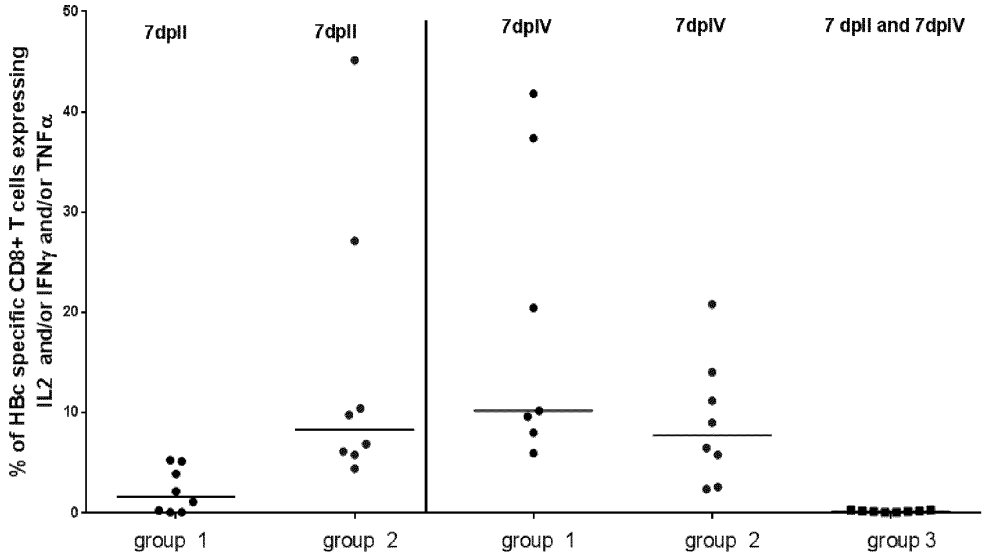
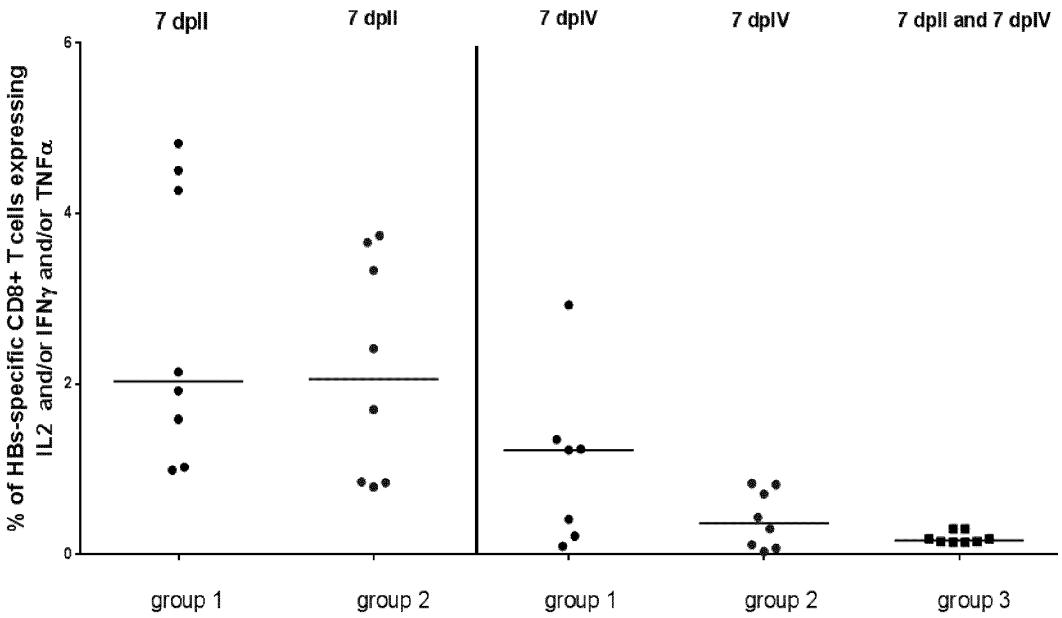


Figure 8 **HBc- (A) and HBs- (B) specific CD8$^+$ T-cell responses at 7days post-second and fourth dose (individual animals with medians)**

A



B



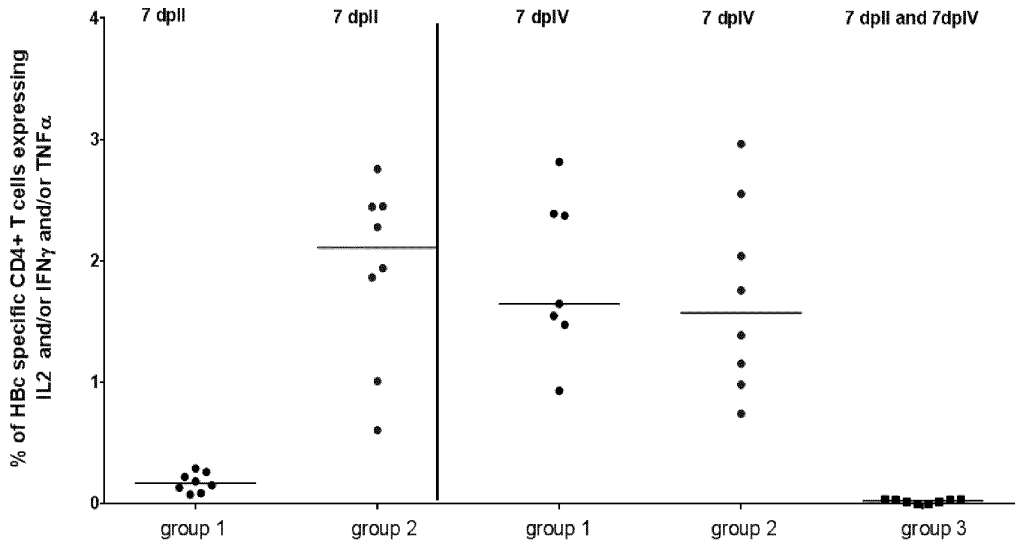
Group 1: mice immunized on Day 0 with 108 vp ChAd155-hli-HBV, on Day 28 with 107 pfu MVA-HBV, on Day 42 and 56 with HBc-HBs 4-1/AS01B-4. At 7dpIV one data point is missing due to a technical issue.

Group 2: mice immunized on Day 0 with 108 vp ChAd155-hli-HBV + HBc-HBs 4-1/AS01B-4, on Day 28, 42 and 56 with 107 pfu MVA-HBV+ HBc-HBs 4-1/AS01B-4.

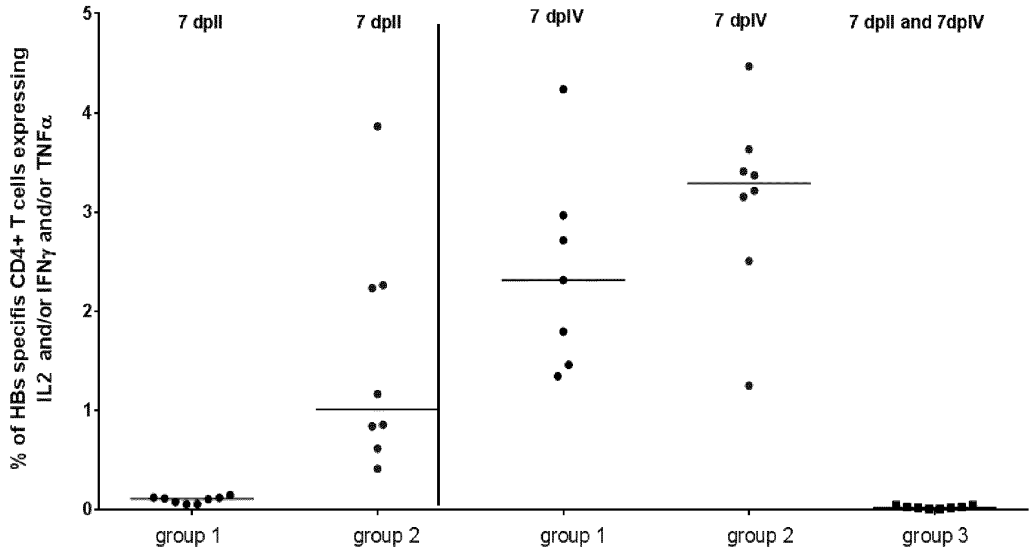
Group 3: mice injected on Day 0, 28, 42 and 56 with NaCl.

Figure 9 **HBc- (A) or HBs- (B) specific CD4$^+$ T-cell responses at 7dpII and 7 dpIV (individual animals with medians)**

A

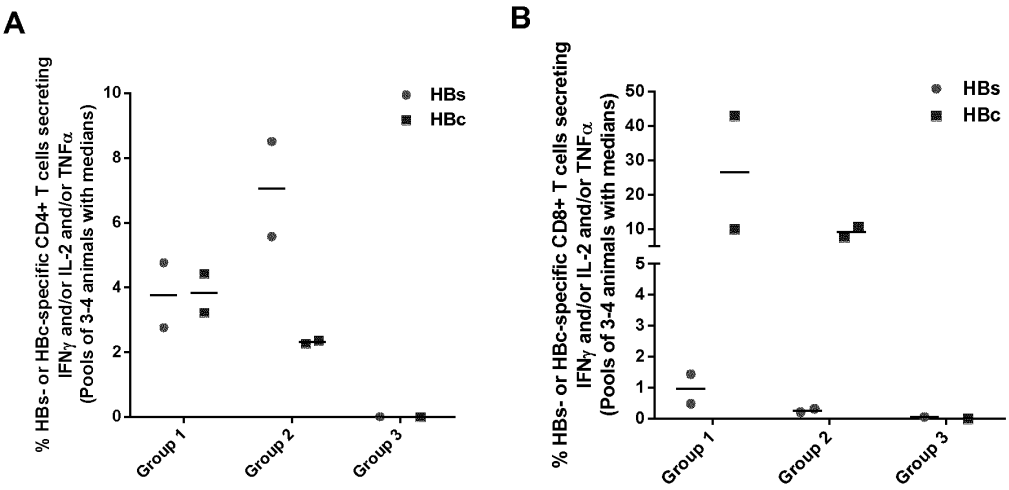


B



Group 1: mice immunized on Day 0 with 108 vp ChAd155-hli-HBV, on Day 28 with 107 pfu MVA-HBV, on Day 42 and 56 with HBc-HBs 4-1/AS01B-4. At 7dpIV one data point is missing due to a technical issue.
Group 2: mice immunized on Day 0 with 108 vp ChAd155-hli-HBV + HBc-HBs 4-1/AS01B-4, on Day 28, 42 and 56 with 107 pfu MVA-HBV+ HBc-HBs 4-1/AS01B-4.
Group 3: mice injected on Day 0, 28, 42 and 56 with NaCl.

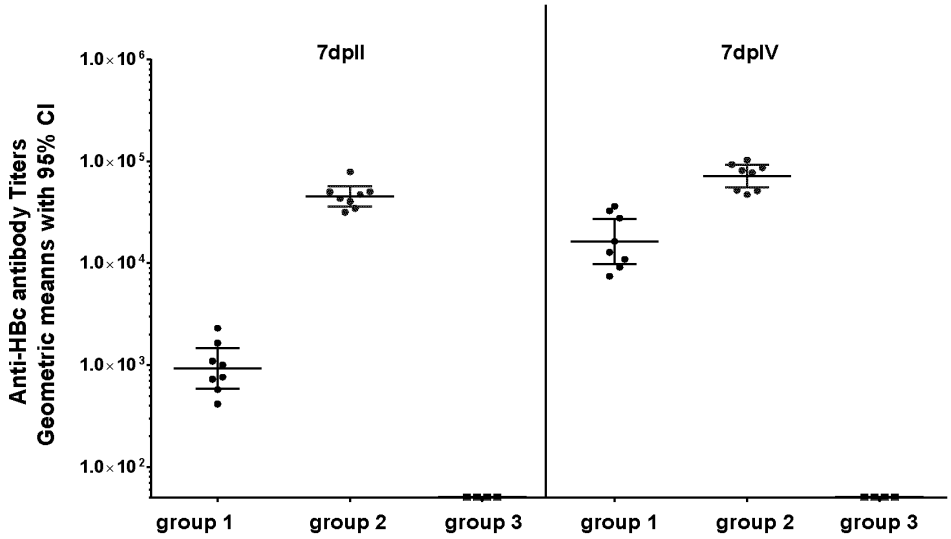
Figure 10 **HBc- and HBs-specific $CD4^+$ and $CD8^+$ T-cells in liver infiltrating lymphocytes 7 days post-fourth dose (pools of 3 or 4 animals with medians)**



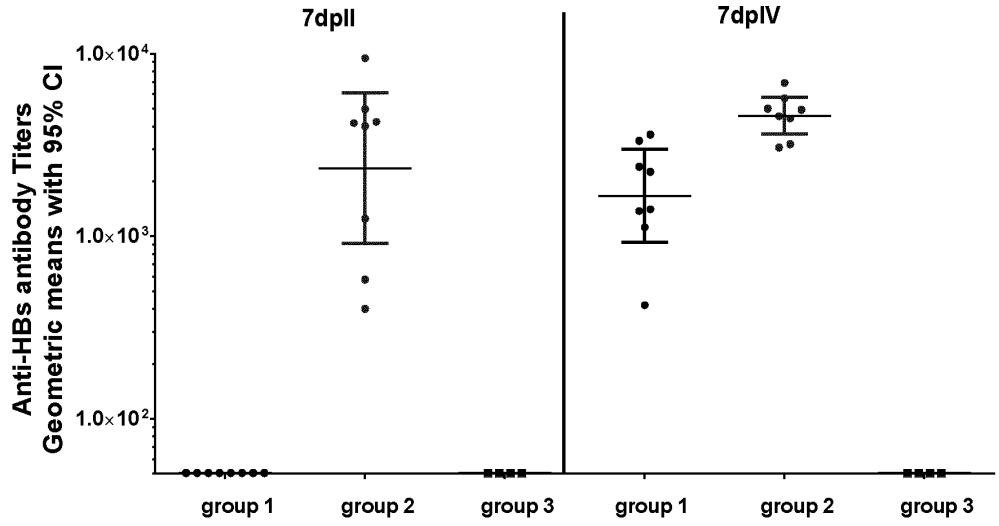
Group 1: mice immunized on Day 0 with 108 vp ChAd155-hli-HBV, on Day 28 with 107 pfu MVA-HBV, on Day 42 and 56 with HBc-HBs 4-1/AS01B-4. At 7dpIV one data point is missing due to a technical issue.
Group 2: mice immunized on Day 0 with 108 vp ChAd155-hli-HBV + HBc-HBs 4-1/AS01B-4, on Day 28, 42 and 56 with 107 pfu MVA-HBV+ HBc-HBs 4-1/AS01B-4.
Group 3: mice injected on Day 0, 28, 42 and 56 with NaCl.

Figure 11 **HBc-specific antibody response after prime boost vaccine regimens (individual animals with geomeans are represented)**

A



B

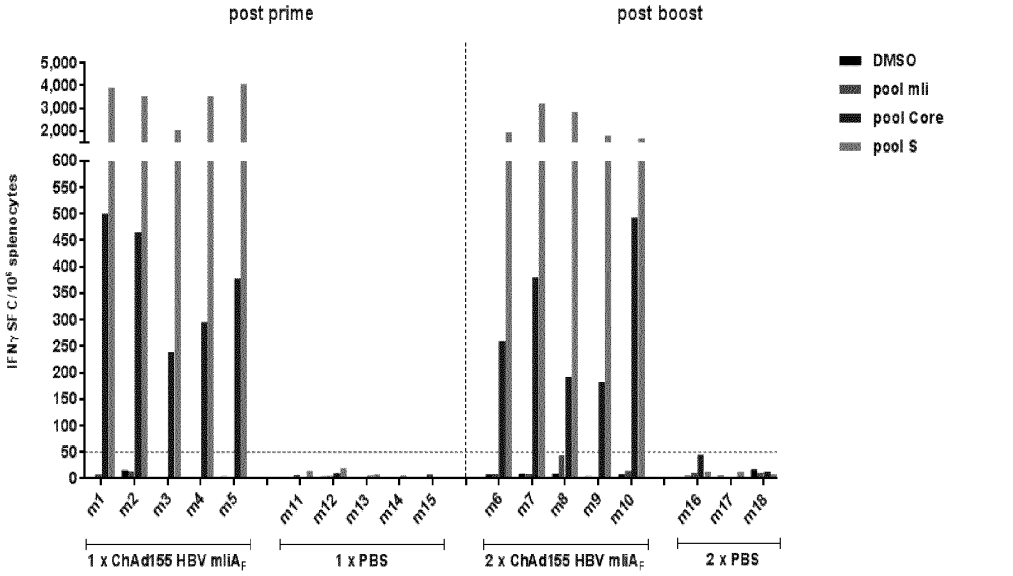


Group 1: mice immunized on Day 0 with 10^8 vp ChAd155-hli-HBV, on Day 28 with 10^7 pfu MVA-HBV, on Day 42 and 56 with HBc-HBs 4-1/AS01$_{B-4}$.

Group 2: mice immunized on Day 0 with 10^8 vp ChAd155-hli-HBV + HBc/HBs 4-1/AS01$_{B-4}$, on Day 28, 42 and 56 with 10^7 pfu MVA-HBV+ HBc-HBs 4-1/AS01$_{B-4}$.

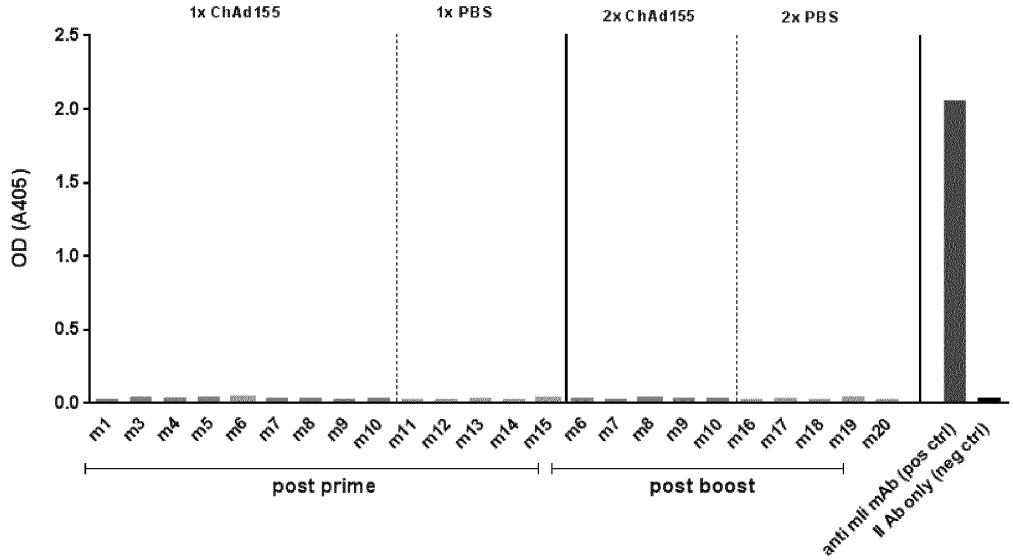
Group 3: mice injected on Day 0, 28, 42 and 56 with NaCl.

Figure 12 **mli-, HBc- and HBs-specific IFNγ ELISpot responses, 2 weeks post-first and second injections**



mli-, HBc- and HBs-specific IFN-γ ELISpot responses elicited by 2 administrations of ChAd155-mli-HBV (10^9vp) in CB6F1 mice, 2 weeks post-first and second injections (5 animals/group/time-points). The red dotted line is the cut-off of the assay.

Figure 13 **Anti-mli antibody responses (ELISA) elicited by 2 administrations of ChAd155-mli-HBV (10^9vp) in CB6F1 mice, 2 weeks post-first and second injections**



Anti-mli antibody responses (ELISA) elicited by 2 administrations of ChAd155-mli-HBV (10^9vp) in CB6F1 mice, 2 weeks post-first and second injections (10 animals post-first and 5 animals post-second injection are represented).

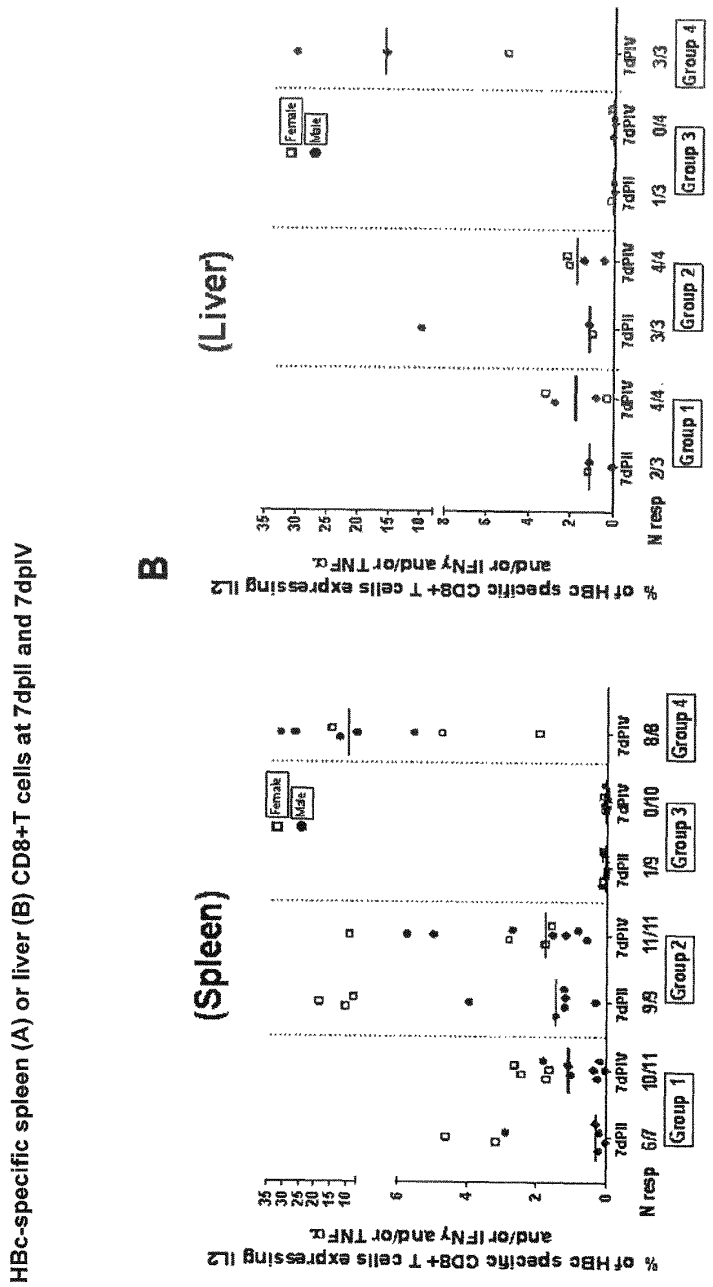


Figure 14 HBc-specific spleen (A) or liver (B) CD8+T cells at 7dpII and 7dpIV

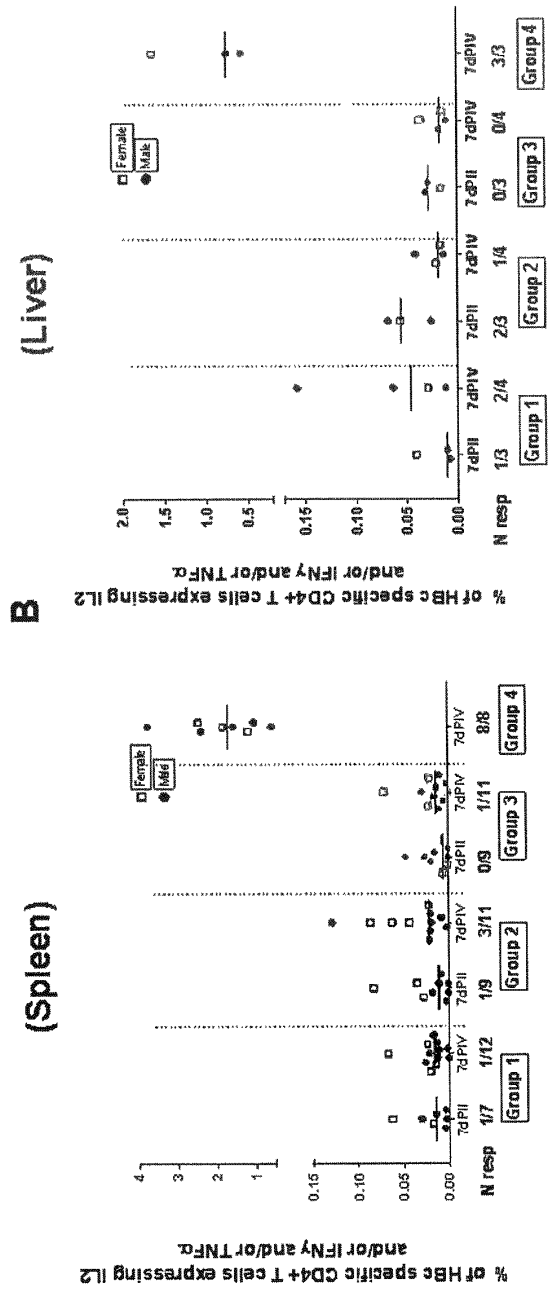


Figure 15 HBc-specific spleen (A) or liver (B) CD4+ T cells at 7dpII and 7dpIV

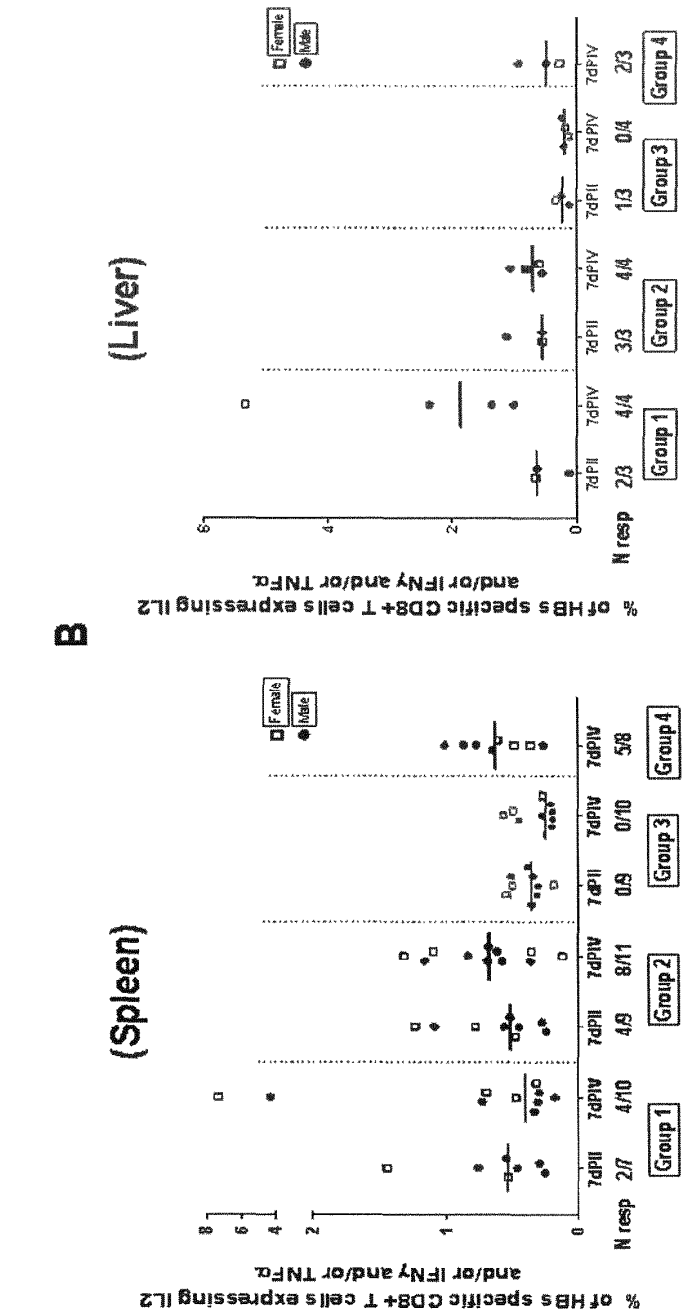


Figure 16 HBs-specific spleen (A) or liver (B) CD8+ T cells at 7dpII and 7dpIV

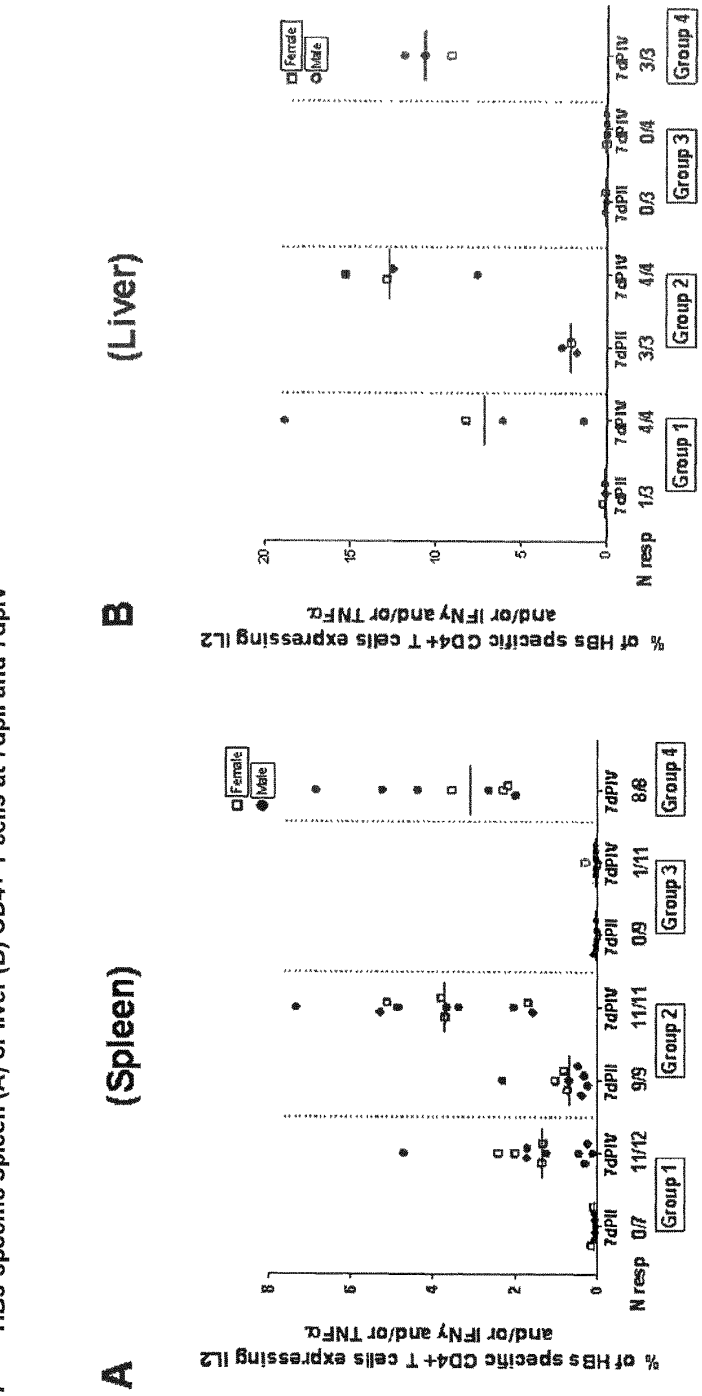


Figure 17 HBs-specific spleen (A) or liver (B) CD4+ T cells at 7dpII and 7dpIV

Figure 18 Anti-HBs and anti-HBc binding antibody responses at Days 23, 65 and 93

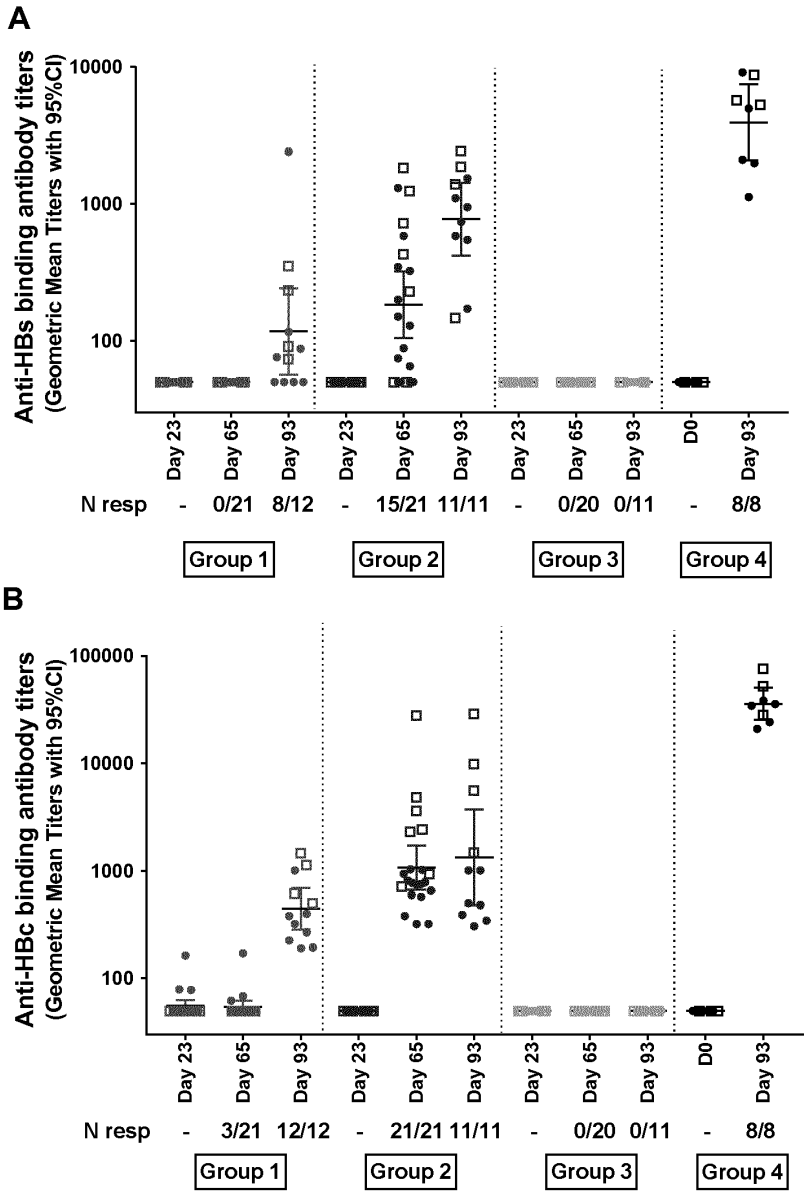
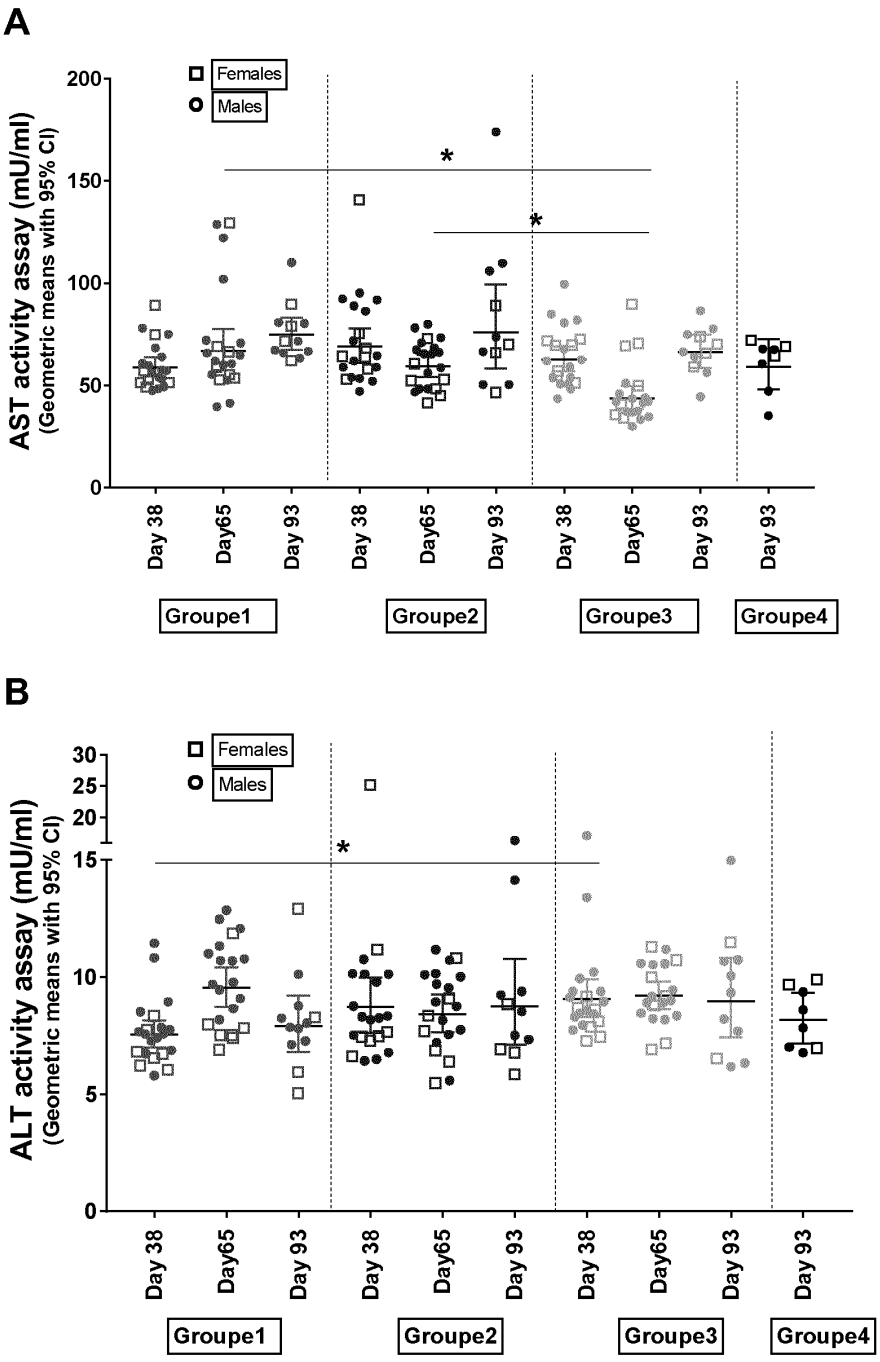


Figure 19 **AST and ALT levels measured in sera from mice (groups 1, 2, 3 and 4) at Days 38, 65, and/or 93.**



At Days 38 and 65, ALT and AST levels were measured in 21 animals/groups and at Day 93, in 12 animals from Group 1, 11 animals from Groups 2 and 3 and 8 animals from Group 4. * represents statistical significance.

Figure 20 HBs antigen levels in sera from AAV2/8-HBVinjected mice

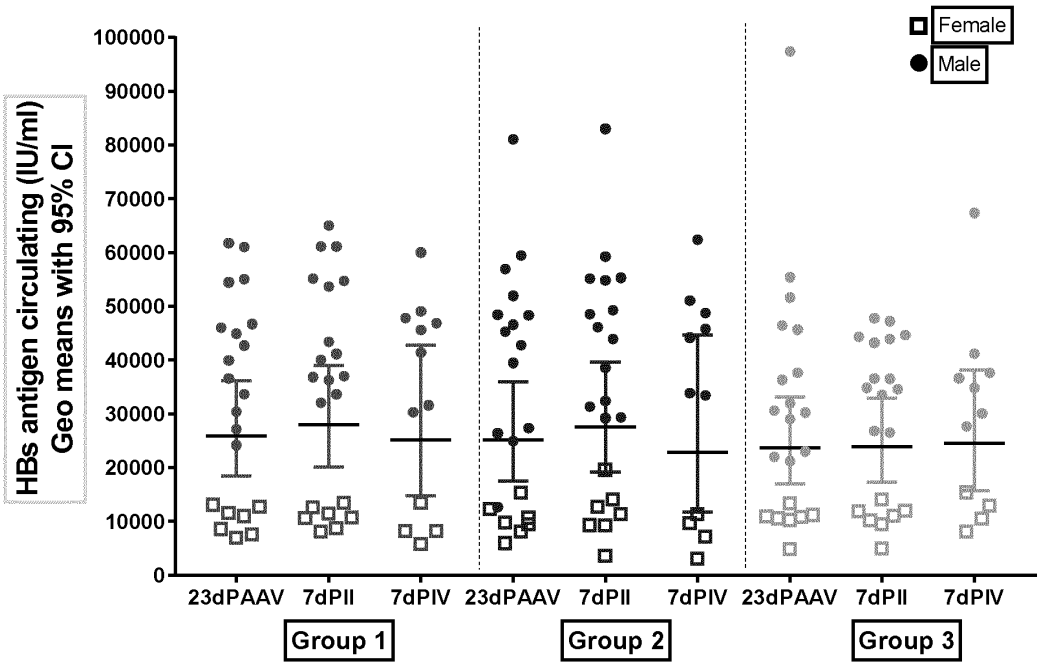


Figure 21 Structure of HBc-2A-HBs vector insert construct

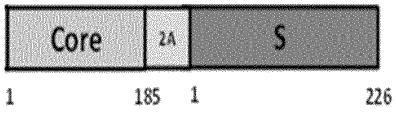
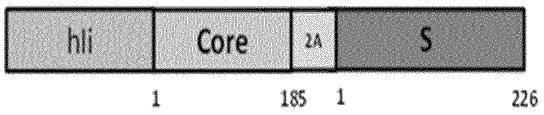


Figure 22 Structure of hli-HBc-2A-HBs vector insert construct



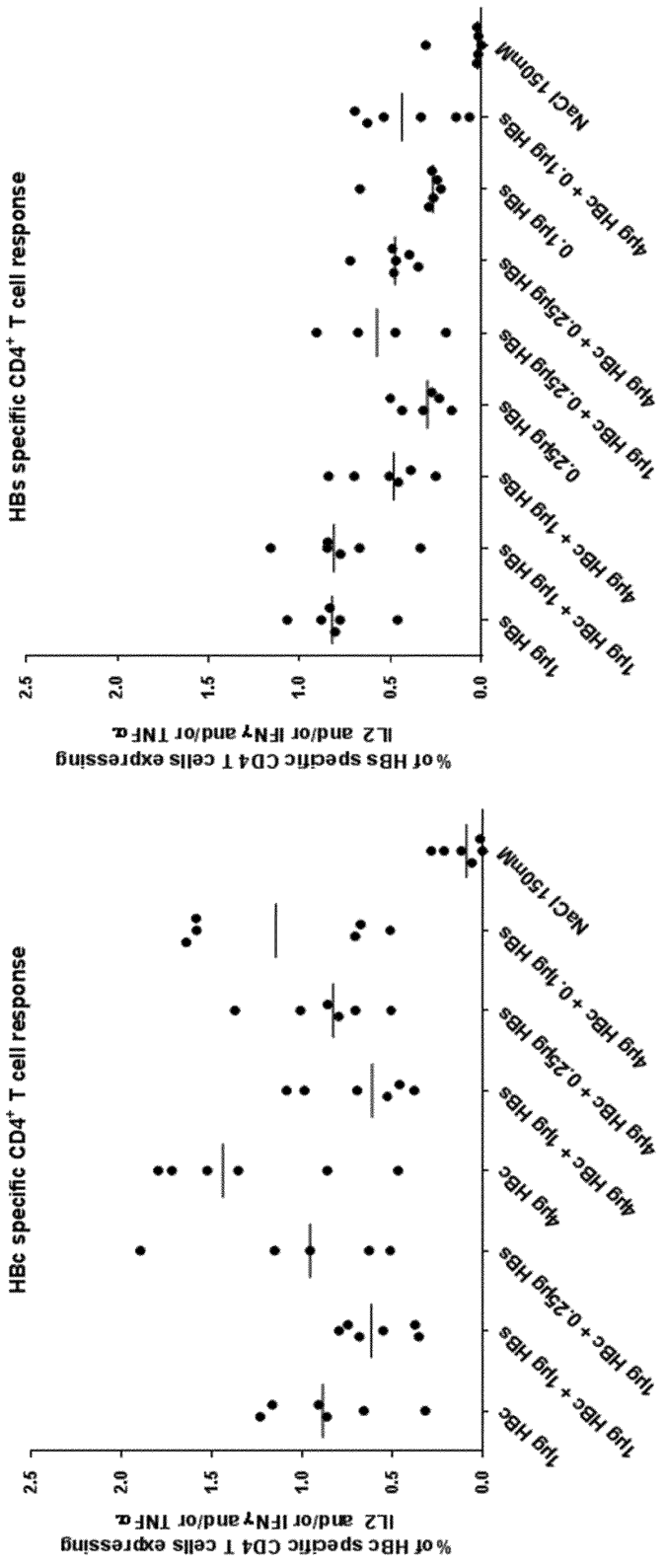


Figure 23 Frequency of HBc- and HBs-specific CD4+ T-cells in the leukocytes of CB6F1 mice 7 days after the 2nd immunization

Figure 24 Frequency of HBc- and HBs-specific CD4+ T-cells in the leukocytes of CB6F1 mice 7 days after the 3rd immunization

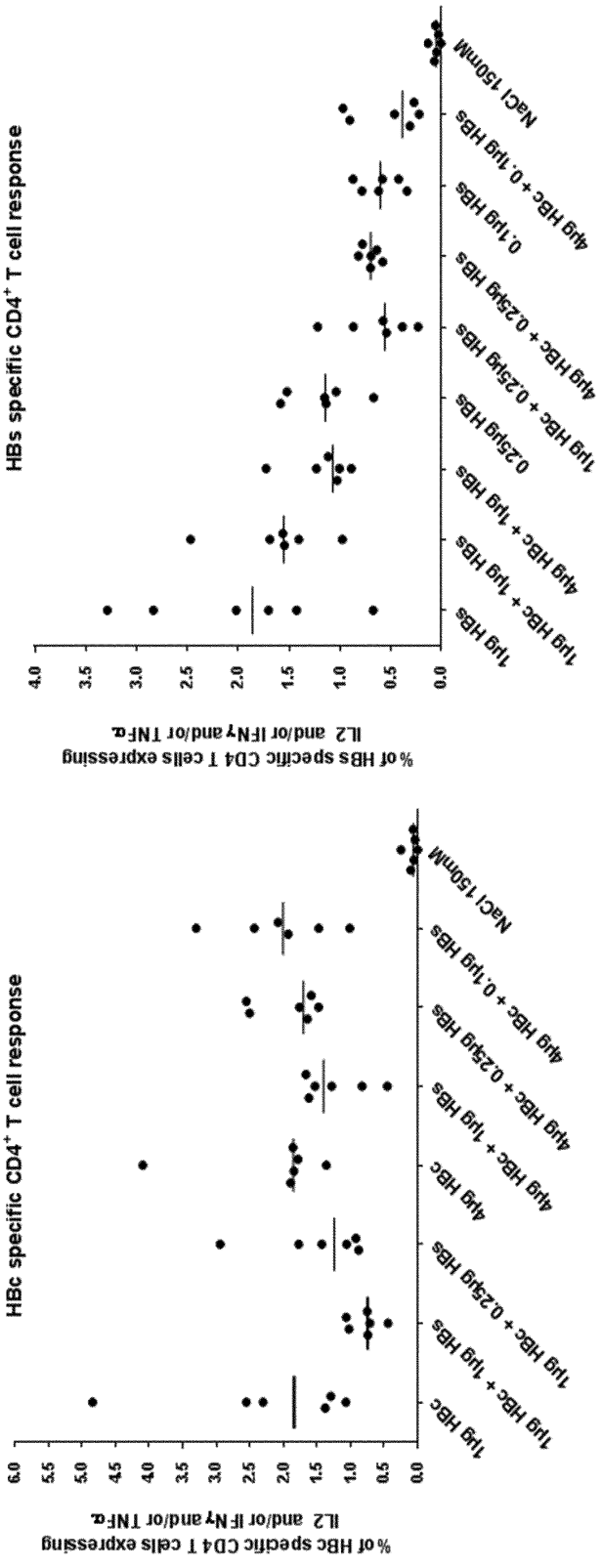
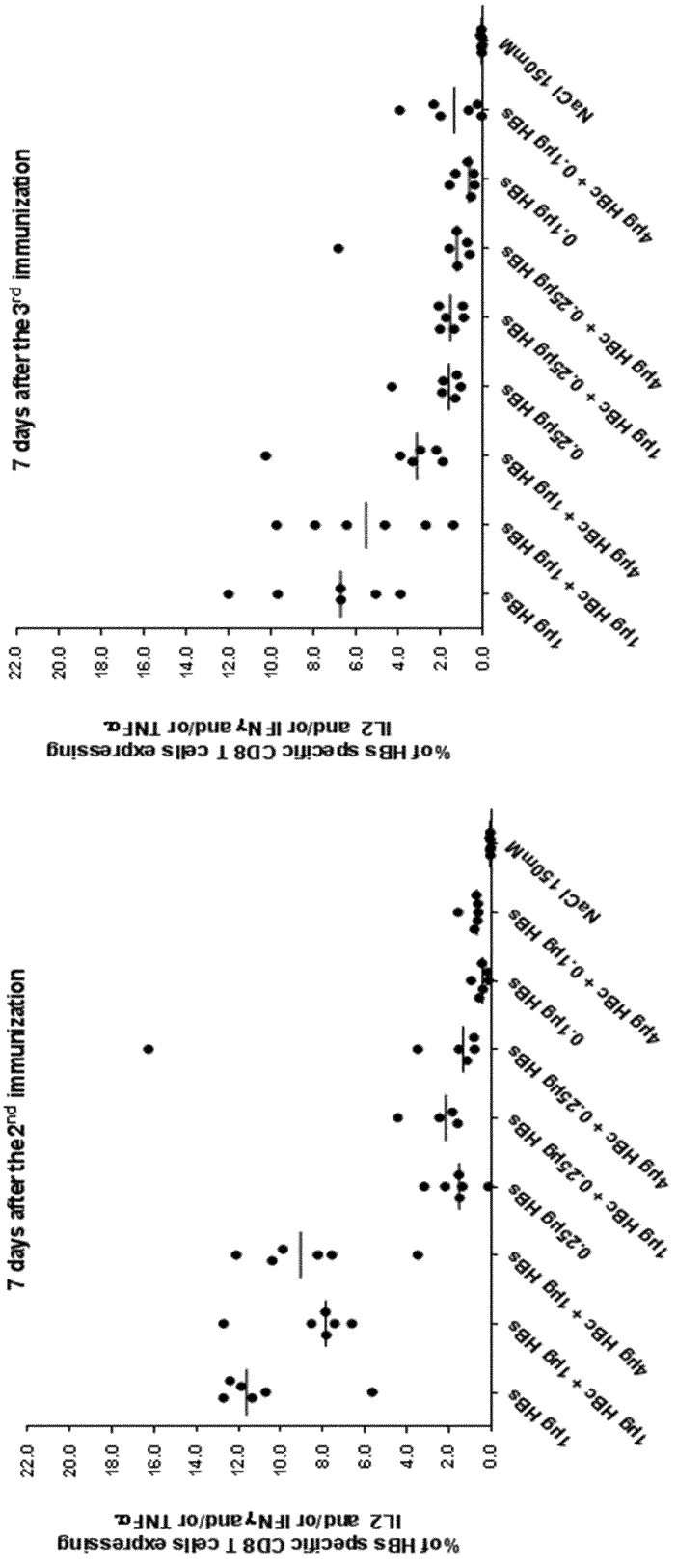


Figure 25 Frequency of HBs-specific $CD8^+$ T-cells in the leukocytes of CB6F1 mice 7 days after the 2nd and the 3rd immunization



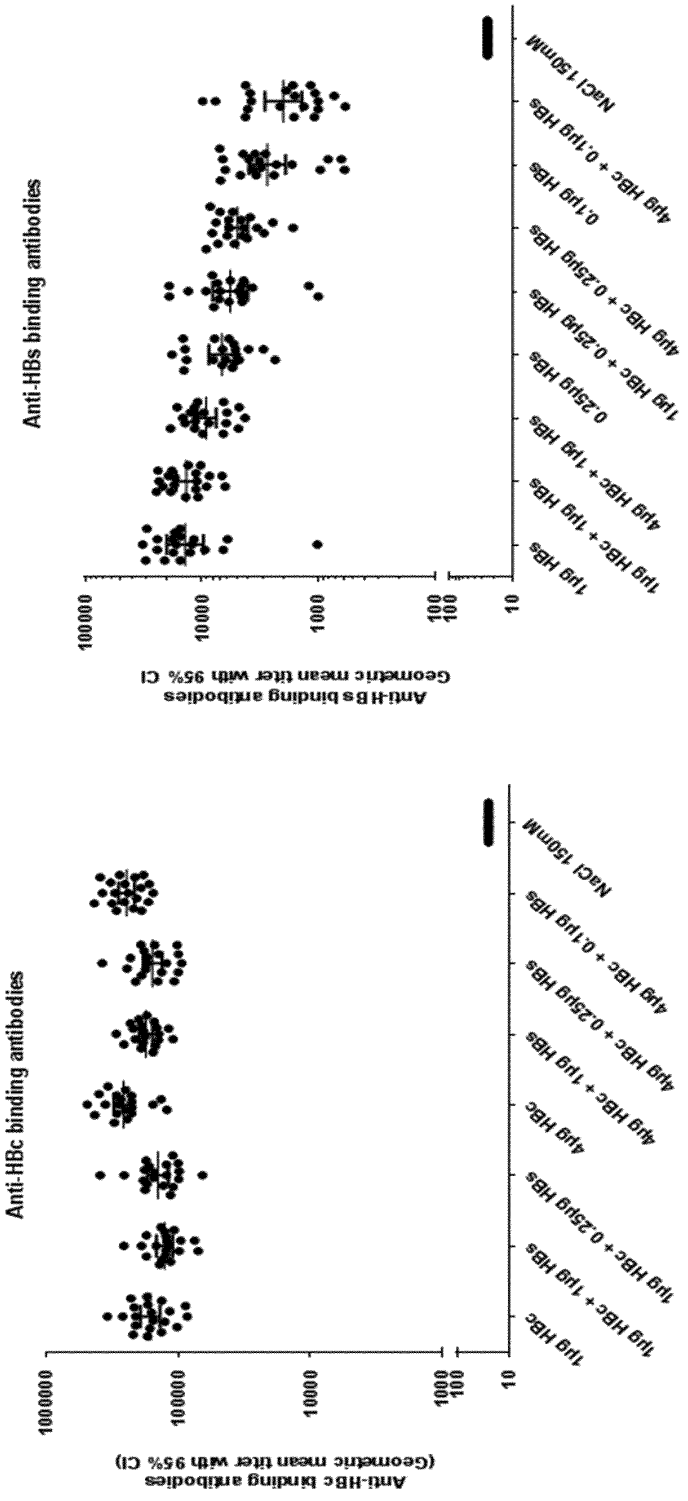


Figure 26 Anti-HBc and HBs-humoral responses induced in CB6F1 mice at 14 days after the 2nd immunization

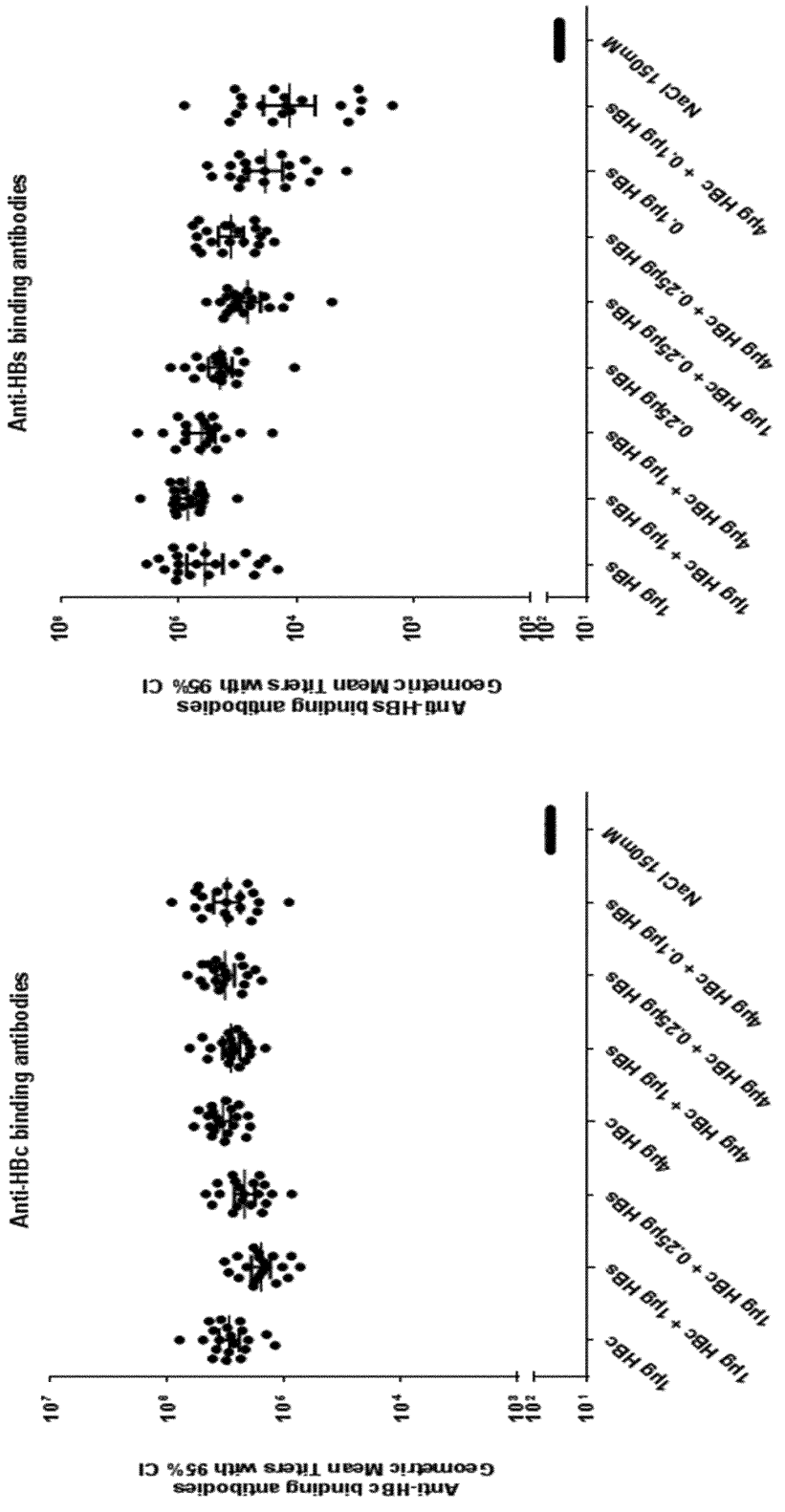


Figure 27 Anti-HBc and HBs-humoral responses induced in CB6F1 mice at 14 days after the 3rd immunization