

Provided herein are nucleic acid sequences encoding hepatitis B virus (HBV) core proteins, surface antigen proteins, fragments and combinations thereof as well as genetic constructs/vectors and vaccines that express said protein sequences. These vaccines are able to induce an immune response peripherally and in the liver by recruiting both cellular and humoral agents. Also provided are methods for prophylactically and/or therapeutically immunizing individuals against HBV. The combination vaccine can also be used for particular design vaccines for particular levels of immune responses to HBV challenge.