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Structural elements of a therapeutic vaccine against hepatitis B virus

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A 23 kDa molecular weight chimeric protein comprising both the core and surface portions of the Hepatitis B viral envelope has been designed on the premise that if the HBV surface protein is fused with the core protein of the viral envelope, it can produce both B-cell and T-cell immune responses. The engineered protein contains 216 amino acids from both the core and surface regions of the viral envelope protein. NNPREDICT and PSIPRED programs have been used to obtain the secondary structure elements. The tertiary structure of the protein was predicted using 3D-JIGSAW program. In the predicted structure, α-helices form a helical bundle domain and the β-strands form another separate domain.

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