S1 Fig. Increased yield of HBc183_F97L CLPs in E. coli by codon usage adaptation. E. coli BL21*CP cells were transformed with pET28a2 vectors carrying the F97L mutation in the context of our conventional HBc183 gene (1) or an E. coli codon usage optimized variant (HBc183opt; this work). (A) Sucrose gradient enrichment. Cleared lysates from the indicated IPTG-induced cultures were sedimented through 10%-60% sucrose gradients as described (2). Fourteen fractions were harvested from the top and analyzed by SDS-PAGE and Coomassie Blue staining. CLPs typically accumulate in fraction 7-11. Yields from the HBc183opt gene were routinely ~3-fold higher. Comparable results were obtained for the wild-type HBc183opt vector. (B) Negative stain electron microscopy (EM). Gradient-enriched CLPs from F97L or wild-type HBc183 were stained with uranyl acetate. No F97L-specific differences in particle shape or T=3 vs. T=4 frequency were evident.

Supplementary references: