Supplementary Figures:

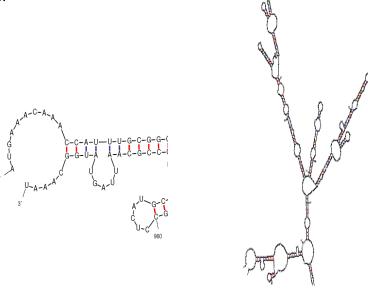
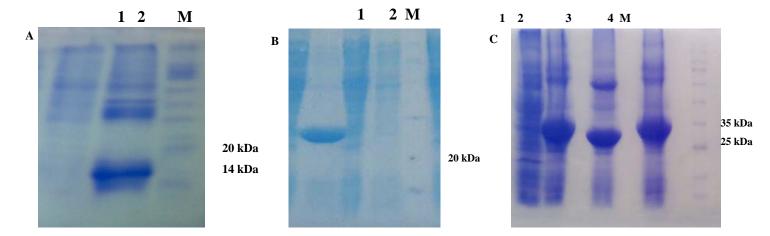
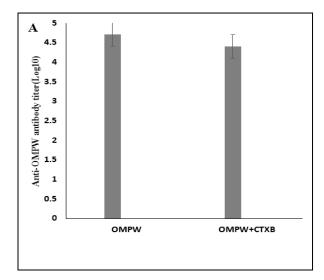


Figure 1. Prediction of RNA secondary structure of the chimeric gene using Mfold algorithm. Left figure shows the initial part of  $5\,\mathrm{mRNA}$ .



**Figure 2. SDS- PAGE analysis of protein expressions.** (A) CtxB, lane 1 pET28a induced with IPTG as control, lane 2 CtxB clone induced with IPTG (15.4 kDa protein). (B) OmpW, lane 1 OmpW clone induced with IPTG (24.8 kDa), lane 2 pET28a induced with IPTG as control. (C) Chimer, lane 1 pET28a induced with IPTG as control, lane 2&4 chimer clone induced with IPTG (36.8 kDa), lane 3 OmpW clone with linker induced with IPTG as control (27.9 kDa). M: Molecular weight marker



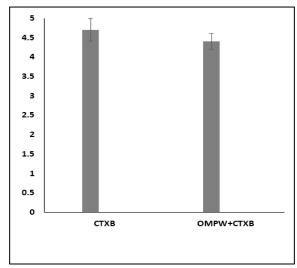


Figure 3. The specific IgG titers against recombinant proteins. (A) Analysis of the OMPW-specific IgG titers. (B) Analysis of the CTXB-specific IgG titers. Antibody titers were calculated from the highest dilution of a serum sample that produced an ELISA OD of >0.3 (above the background), and expressed in a scale of  $\log_{10}$ .