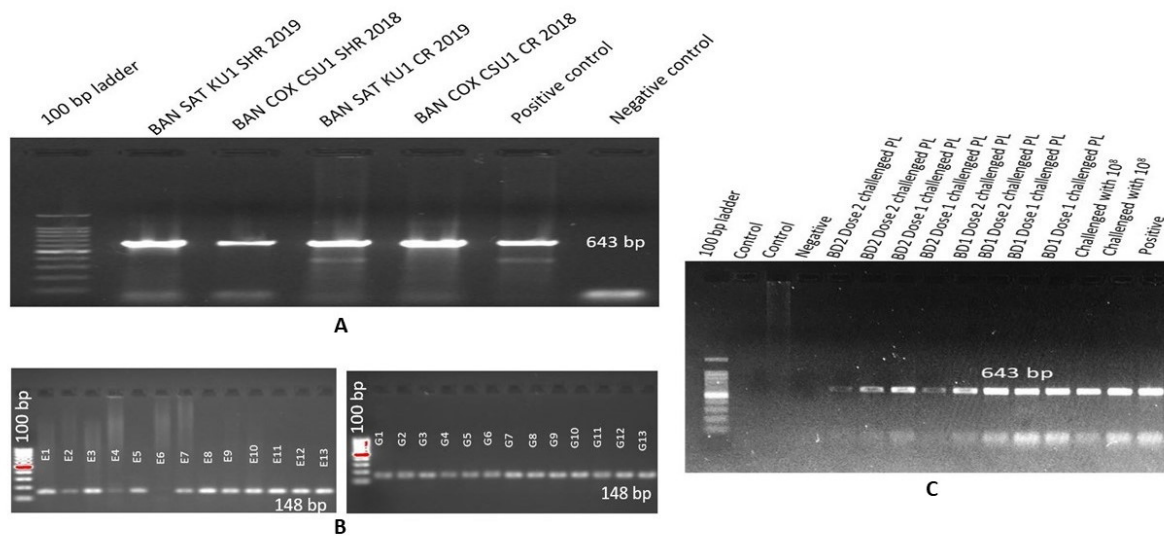
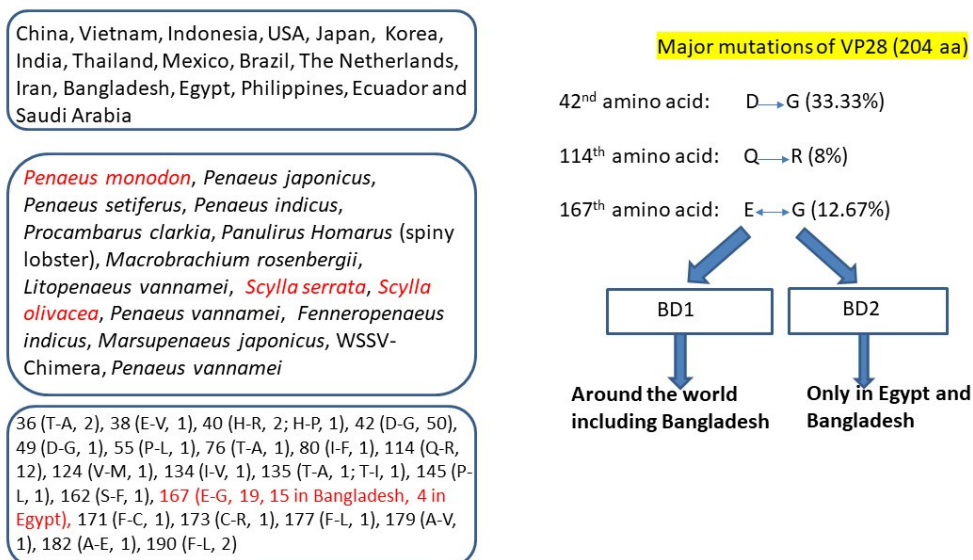


## Supplementary Figures

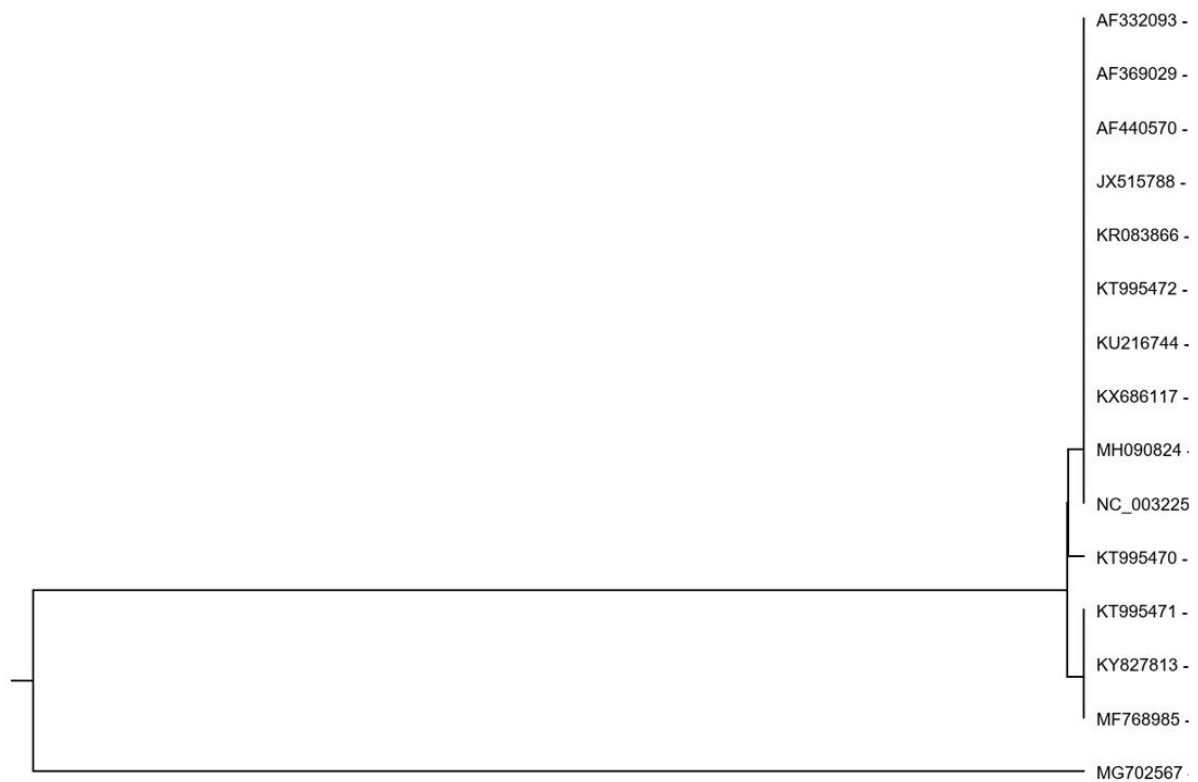


**Figure S1.** A. Lane 2: positive shrimp sample from Satkhira, lane 3: positive shrimp sample from Cox's Bazar, lane 4: positive *Scylla olivacea* sample from Satkhira, lane 5: positive *Scylla olivacea* sample from Cox's Bazar, lane 6: positive control, lane 7: (Negative control) sample in which WSSV was not detected; B. 148 bp products represent detection confirmation in real-time PCR products from both challenged groups (E and G represent samples of BD1 and BD2, respectively); C. Lane 2-3: Samples from control group showing no band, lane 4: No template control, lane 5-14: Challenged PL positive in conventional PCR, and lane 15: positive control (Lane 1s in A, B and C represent 100 bp ladder)

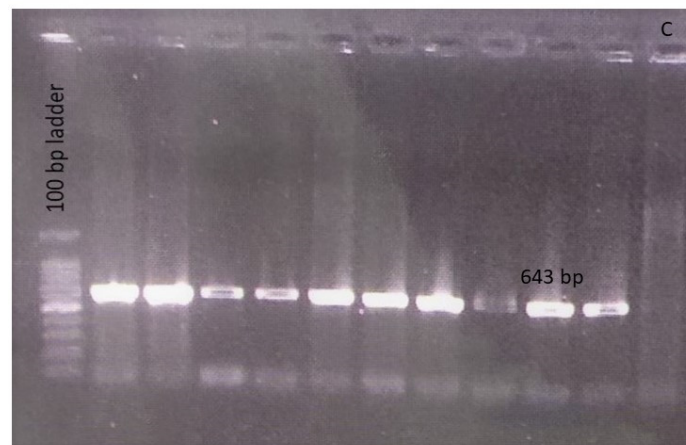
## Mutation analysis of VP28



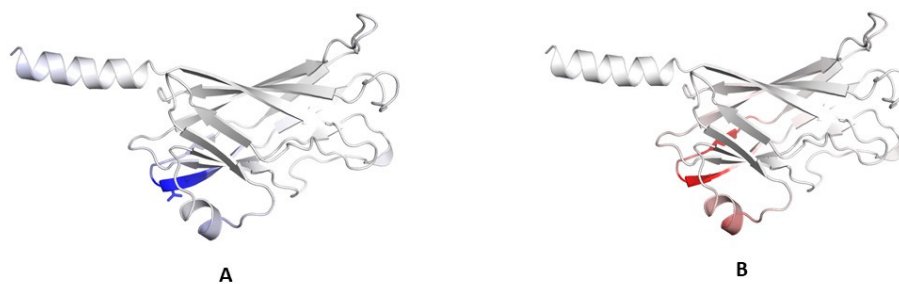
**Figure S2.** Major mutations of VP28 reported from different countries and hosts (our sequences and previously published sequences downloaded from NCBI were used for the analysis)



**Figure S3.** VP28 sequences retrieved from previously published whole genome sequences used for making phylogenetic tree using Geneious Prime Trial version 2020



**Figure S4.** Lane 1: 100 bp ladder, lane 2-11: infected crabs after exposure to WSSV, and lane 12: crab from control group (no band in the control confirmed samples of other lanes showing bands were positive)



**Figure S5.** A. Glycine to Glutamic Acid signifies rigidification and B. Glutamic Acid to Glycine at 167th amino acid position signifies gaining flexibility using DynaMut web server. 'Blue' signifies a rigidification of the structure (G167E) (Figure S5A) and 'Red' represents a gain in flexibility (E167G) (Figure S5B).