



Supplementary Figure 1. Differential plots of ABCB. A. The plot based on Figure 2B. Horizontal axis is the residue number and the vertical axis is the mean differential value ($\Delta W_j(B-A)$). A white box on the horizontal axis shows domain organization and a black box is the location of the second coupling helix. A blue circle with amino acid one letter code on the graph is the position of benign variation and red circle is the position of pathogenic variation, B. The differential plot based on Figure 2C. C. The differential plot based on Figure 2D.