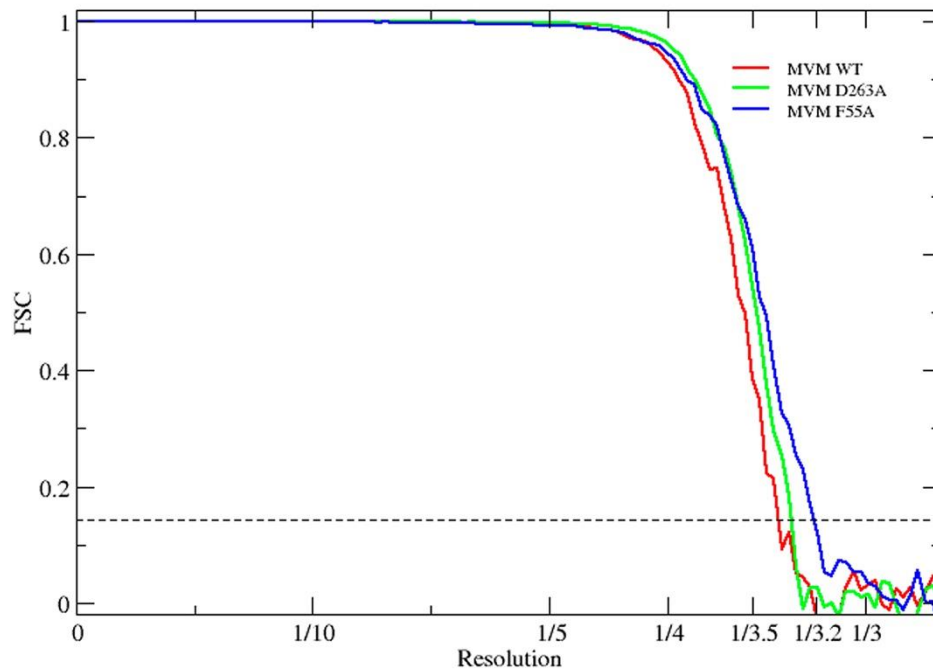
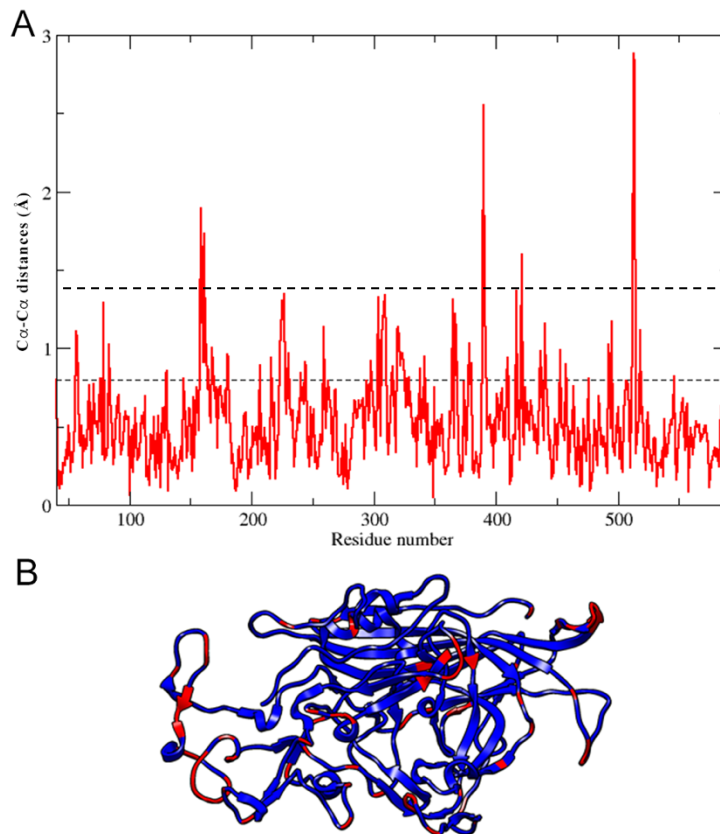


## Supplementary information



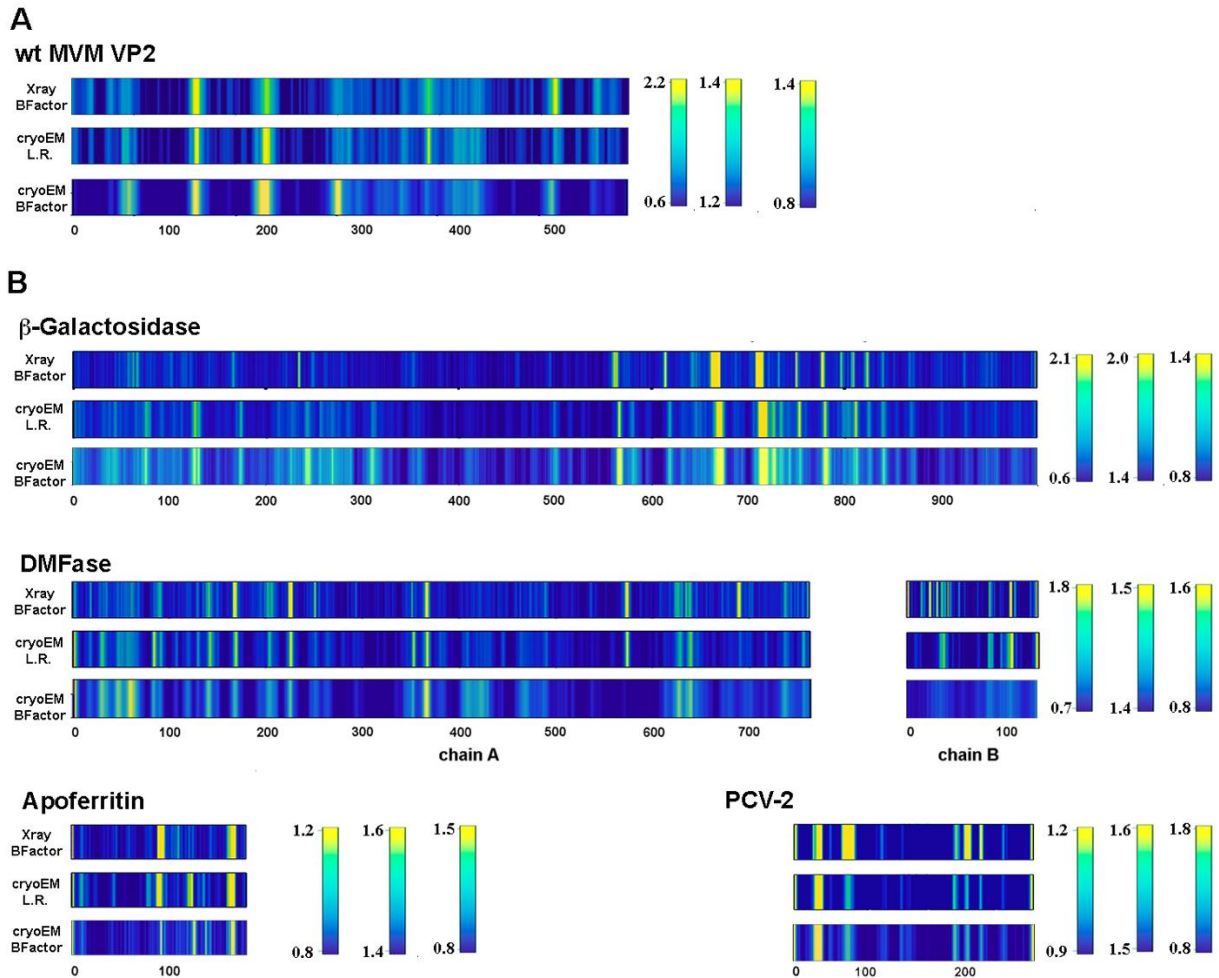
3

4 **Figure S1. Resolution of the wt and D263A and F55A MVM capsids.** Fourier shell  
5 correlation (FSC) resolution curve for wt (red) and D263A (green) and F55A (blue) capsids.  
6 Resolutions based on the 0.143 criteria are indicated. For the 0.143 threshold, values for the wt  
7 capsid were at 3.42 Å. and those for D263A and F55A capsids were at 3.36 Å and 3.26 Å,  
8 respectively.



9

10 **Figure S2. Comparison between the cryo-EM and X-ray structures of wt MVM VP2.** (A)  
 11 Plot showing the C $\alpha$ -C $\alpha$  distances after the superimpositions of all equivalent C $\alpha$  atoms in the  
 12 VP2 structures obtained by either cryo-EM or X-ray crystallography. Dashed lines are traced  
 13 at a C $\alpha$ -C $\alpha$  distance of 0.8 and 1.4 Å. (B) Ribbon representation of the superimposition of the  
 14 VP2 backbone atoms. Regions with C $\alpha$ -C $\alpha$  distances > 0.8 Å are colored red.  
 15



16

17 **Figure S3. Comparison between X-ray crystallography B-factors and cryo-EM LR values**  
18 **and B-factors for the wt MVM capsid protein and different protein complexes.** (A)  
19 Residue-by-residue comparison of crystallographic relative B-factors and cryo-EM relative LR  
20 values and B-factors for the wt MVM capsid. Color distribution along the VP2 sequence is  
21 based on relative X-ray B-factors, relative cryo-EM LR values or relative cryo-EM B-factors  
22 (X-ray), as indicated in the color scales at right. (B) Residue-by-residue comparison of the  
23 crystallographic relative B-factors and cryo-EM relative LR values and B-factors for  $\beta$ -  
24 galactosidase, DMFase, apoferritin and PCV-2. Color distribution along the protein sequences  
25 is as in A.

26

27

28 **Data S1. dat PDB coordinates for wt MVM capsid protein that include relative LR**  
29 **values (separate file).**

30