

**Table S1.** Cross-correlation coefficient (CCC) of crystal structures and the EM density map.

CCC values were calculated using 'fit in map' program in Chimera.

Discs	CCC	CCC(use only data above contour level)
A1-1(A2-1)	0.851	0.910
A1-2(A2-2)	0.826	0.886
A1-3(A2-3)	0.838	0.877
A1-4(A2-4)	0.847	0.902
B-1(B'-1)	0.811	0.881
B-2(B'-2)	0.781	0.841
C1-1(C2-1)	0.737	0.792
C1-2(C2-2)	0.761	0.824
Rb-1(Rb'-1)	0.786	0.855
Rb-2(Rb'-2)	0.805	0.872
Rb-3(Rb'-3)	0.865	0.918
Rb-4(Rb'-4)	0.858	0.932
Rs1-1(Rs1'-1)	0.847	0.93
Rs1-2(Rs1'-2)	0.912	0.959
Rs1-3(Rs1'-3)	0.914	0.959
Rs1-4(Rs1'-4)	0.846	0.943
Rs2-1(Rs2'-1)	0.686	0.562
Rs2-2(Rs2'-2)	0.713	0.605
Rt-1(Rt'-1)	0.822	0.836
Rt-2(Rt'-2)	0.809	0.786
Rt-3(Rt'-3)	0.825	0.809
Rt-4(Rt'-4)	0.779	0.810
PSII	0.624	0.609