



Fig. S4 Structure determination of ALMT1_{apo/pH7.5}.

a, Size-exclusion chromatography of the apo AtALMT1 at pH 7.5 on Superose 6 (GE Healthcare), and SDS-PAGE image of the final protein sample. **b**, Representative cryo-EM micrograph of ALMT1_{apo/pH7.5}. **c**, Flowchart of image processing for ALMT1_{apo/pH7.5} particles. **d**, The density map of ALMT1_{apo/pH7.5} colored by local resolution in Å. **e**, The Gold standard Fourier Shell Correlation (FSC) curve of the final 3D reconstruction of ALMT1_{apo/pH7.5}, and the FSC curve for cross-validation between the map and the model of ALMT1_{apo/pH7.5}. **f**, Sample maps at the 13 helices from ALMT1_{apo/pH7.5} at the contour level of 4 σ .

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