



Figure S8 The cryo-EM density map of the SF3a complex components SF3a66 in the early, mature, and late B^{act} complexes. **(A)** The structure of the N-terminal domain (NTD) of SF3a66 in the mature B^{act} complex. The NTD of SF3a66 is located close to the U2 snRNA/BPS duplex at the 5'-end of the BPS. **(B)** A section of the 4.9-Å resolution EM density map of the SF3a66 NTD in the early B^{act} complex. There is no obvious density for the NTD of SF3a66. **(C)** A section of the 5.1-Å resolution EM density map of the SF3a66 NTD in the mature B^{act} complex. Strong density is present for the NTD of SF3a66. The association of the NTD of SF3a66 with the U2 snRNA/BPS duplex may stabilize the interaction between the SF3a complex and the U2 snRNP core, thus indirectly bridging the interaction of the

U2 snRNP with the NTC proteins. **(D)** A section of the 6.5-Å resolution EM density map of the SF3a66 NTD in the late B^{act} complex. The density for the NTD of SF3a66 is similarly strong as that in the mature B^{act} complex.