## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Crosslinking mass spectrometry data showing the intra and intersubunit crosslinks,

MetaMorpheus search parameters, and sequence coverage for the augmin subunits.

File Name: Supplementary Movie 1

Description: Extended and contracted state comparison at the head-tail connection. Movement of HB3 of the V-shaped head and HB4 of the neck of the tail undergoing a 20 Å conformational change when comparing the extended and contracted states.