



**Figure S7. Movement of h17 does not affect the location of h16.** **a, b.** Maps of h17<sub>in</sub> (**a**) and h17<sub>out</sub> (**b**) were represented as transparent and the region corresponding to h16, h17 and h18 were colored in red, yellow and blue, respectively. The location of these helices in a mature 30S (PDB: 7K00) were shown as cartoon in grey. Angles of h16 and h17 relative to the horizontal direction (dash line) were measured.