

S2 | **Map locations of SaPI att sites.** **a** | The circle represents a composite staphylococcal chromosome with scales in minutes (corresponding to main text, table 1) and in megabases. All elements at a given site have the same integrase; thus the sites are designated “att/int” and are numbered in clockwise order. Note that ShPI2, though located at 48’, belongs to att/intIII. This is because the *S. haemolyticus* chromosome has undergone a major inversion⁸. **b** | The SaPI nearest neighbor tree at lower right demonstrates that SaPIs at a given att/int site are not necessarily closely related (except for their integrases) The att/int sites at right are coloured to match the colours in part **a**.

