

Fig. S1: sequence comparison of *orfK*, intergenic sequence *orfK*-*orfJ* and beginning of the *orfJ* gene in ICEs found in *S. parasanguinis* NCFD2020, *S. macedonicus* 33MO, *S. salivarius* F1-4 compared to ICESt3 of *S. thermophilus*. Start and stop codons are indicated as blue rectangles and the *nic* site of *oriT* is indicated as a green arrow.

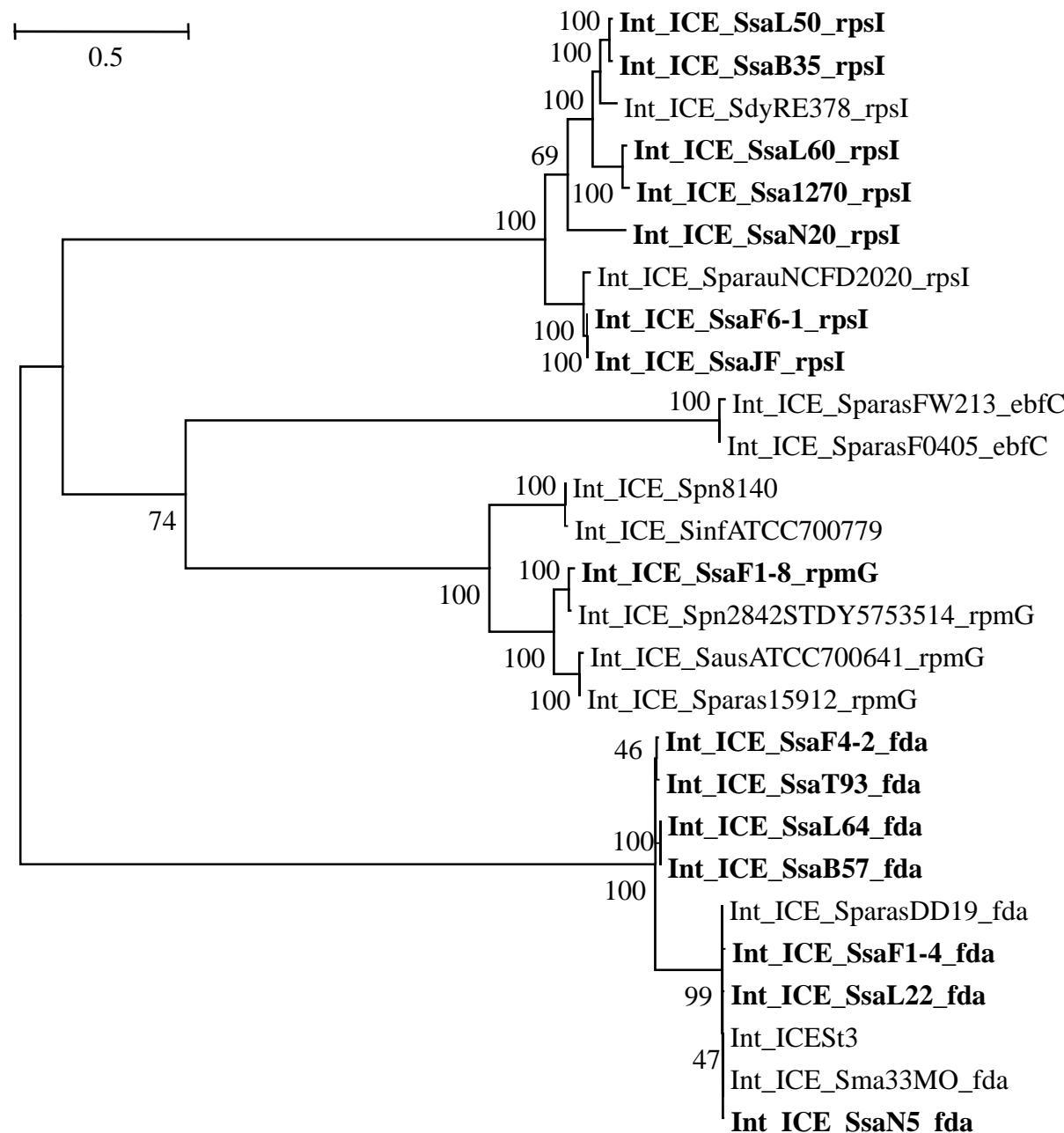


Fig. S2. Phylogenetic BioNJ tree obtained for integrases of ICEs belonging to the ICESt3 subfamily. The integrase protein sequence of twenty-seven ICEs (the 19 ICEs of the ICESt3 subfamily with closely related conjugation modules and 8 additional ones previously reported to belong to the same ICE subfamily but showing more distantly related conjugation modules) were included in the analysis. ICEs of *S. salivarius* are indicated in bold. Bootstrap values supporting main branches are given at nodes.