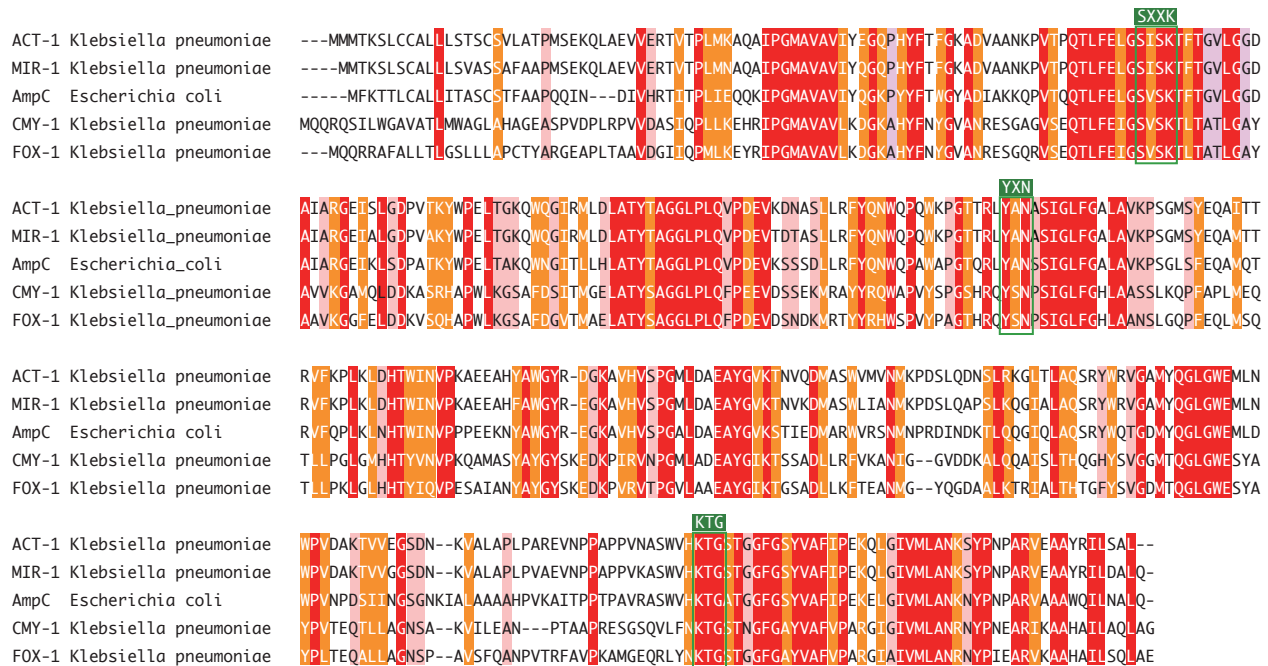


- conserved key motif
- indicates positions which have a single, fully conserved residue
- indicates that one of the following 'strong' groups is fully conserved (>0.5 Gonnet Pam250 matrix)
- indicates that one of the following 'weaker' groups is fully conserved (≤0.5 Gonnet Pam250 matrix)



### Supplemental Fig. 3. The alignment of class C β-lactamases

Class C β-lactamases share the three characteristic motifs of serine-reactive β-lactamases: S-X-X-K in the enzymatic active site, Y-X-N pointing into the active site, and K-T-G forming the opposite wall of the active site. Based on the primary sequences, the alignment was generated using Clustal Omega [32, 33, 34] of GenomeNet at Kyoto University Bioinformatics Center (<https://www.genome.jp/tools-bin/clustalw>).