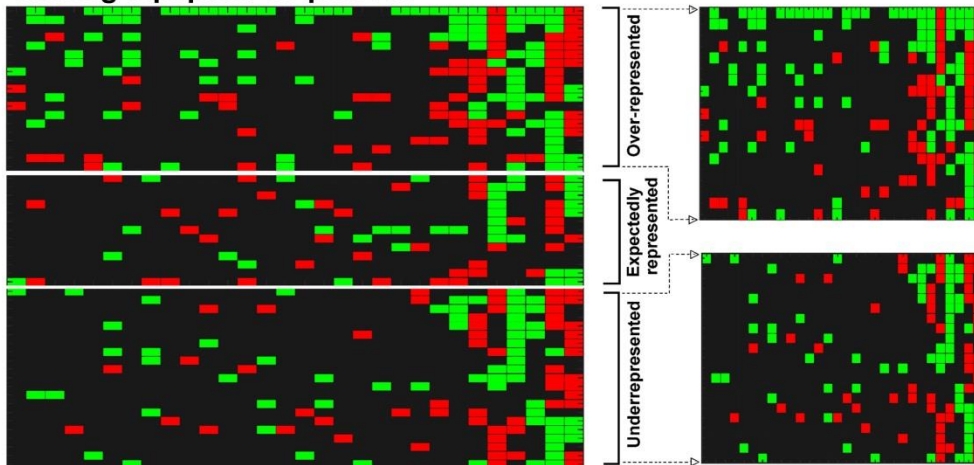
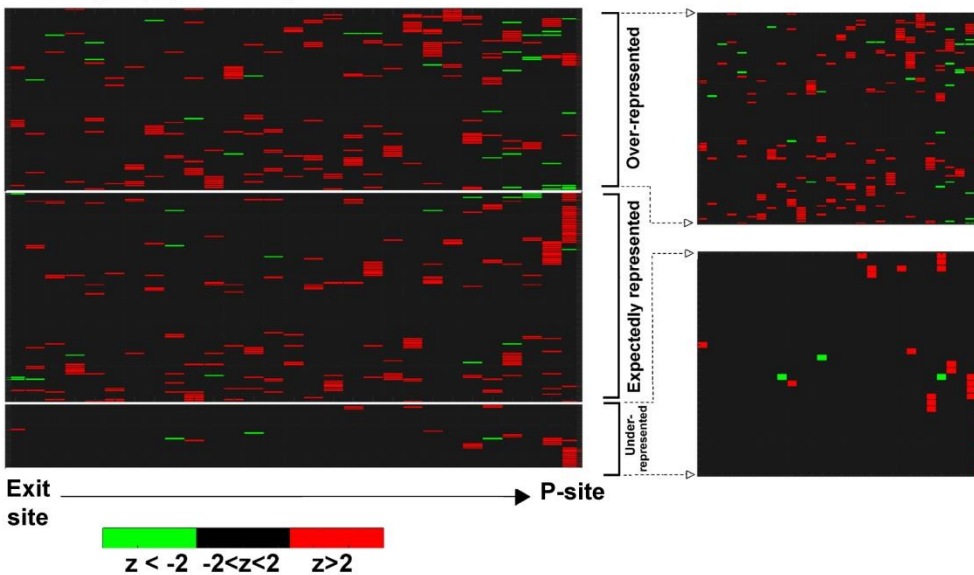


A. Stalling dipeptide sequences



B. Stalling tripeptide sequences



The positions of the stalling peptide sequences along the exit tunnel. Each row represents a specific peptide sequence and each column represents a positions along the tunnel. Thus, each cell represents the tendency of a peptide sequence to occupy specific position along the tunnel. The number of times each peptide sequence was observed at a specific position was calculated based on all *USR*s and was also compared to the average number of times it appeared at the same position in random *USR*s. The difference between the real and random *USR*s was quantified by a standardized score (z-score). Red cells represent significant tendency to appear in these positions and green cells represent significant elimination from these

positions. Insignificant cells are shown in black. **(A)** Stalling dipeptide sequences **(B)** stalling tripeptide sequences.