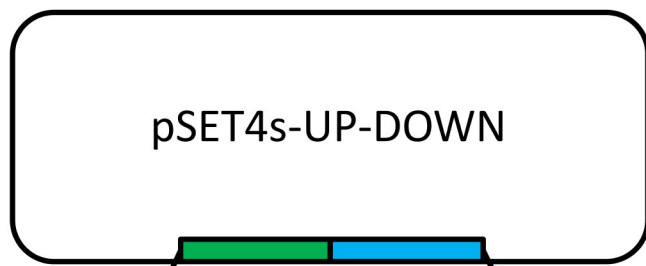


**A**

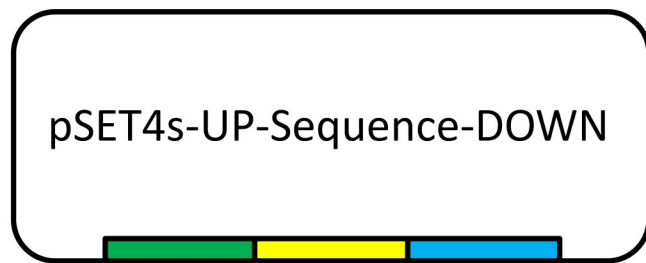
Homologous recombination



The original strain



The gene specifically deleted strain

**B**

Homologous recombination



The original strain



The strain containing specific sequence replacement

**Appendix B** The schematic diagram of genetic modification. Strategies for deletion and replacement of genes by homologous recombination are shown in A and B, respectively. Green and blue rectangles indicate the upstream and downstream flanking sequences, respectively. The orange rectangle indicates the DNA sequence to be deleted. Red and yellow rectangles indicate DNA sequences before and after replacement, respectively.