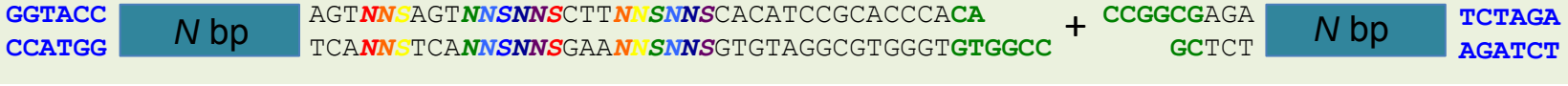
Figure S1

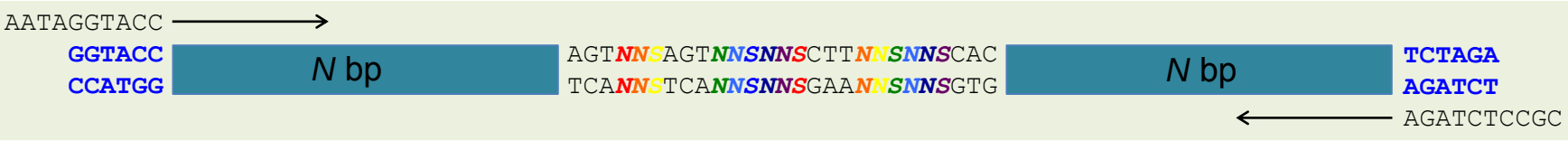
Step 1. Amplify fragments from parent template with appropriate oligonucleotide design.

Key components: 65-70ºC TM
48-96 reactions
15-20 cycles



Step 2. Digest and ligate PCR fragments.

a. Digest with pre-designed, internal restriction site (green)
b. Ligate fragments to create full-length library template



Step 3. Amplify library cassette.

Key components: 48-96 reactions
30 cycles
External restriction sites (blue) used for cloning into final vector

Figure S2

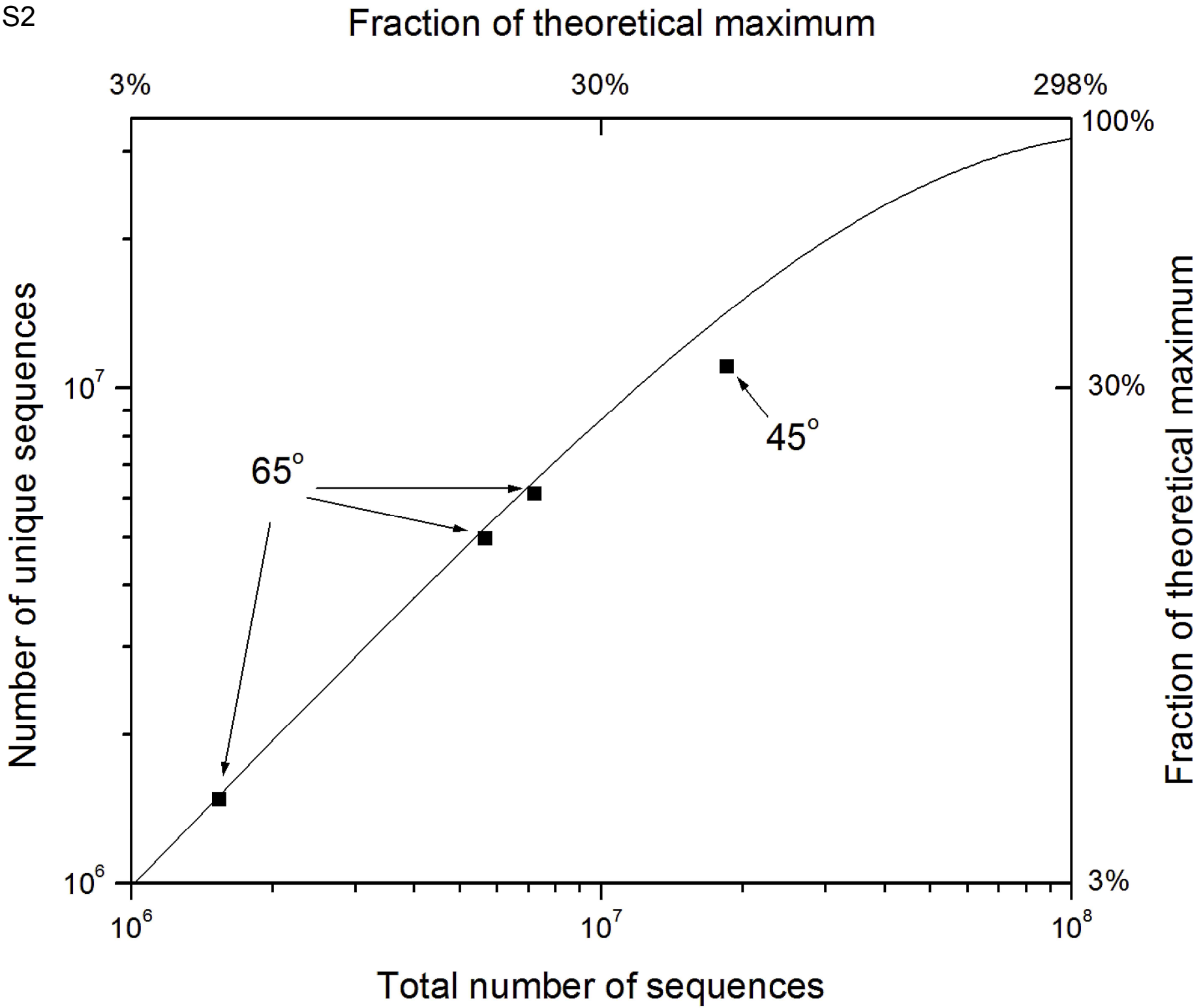
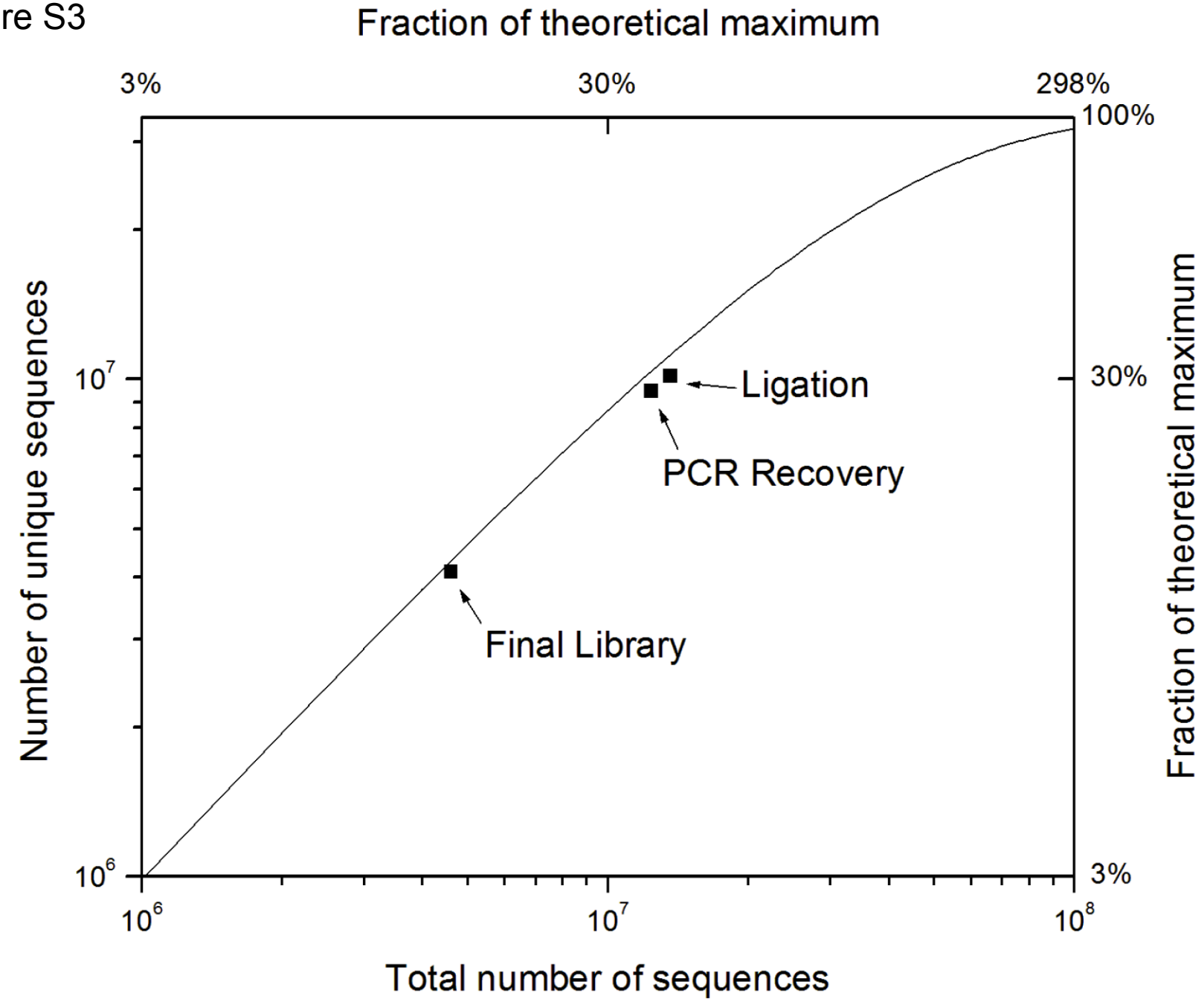

Fraction of theoretical maximum
3%
30%
298%
100%
30%
3%
Number of unique sequences
Fraction of theoretical maximum
10^7
10^6
10^6
10^7
10^8
65°
45°
Total number of sequences

Figure S3


Fraction of theoretical maximum
3%
30%
298%
100%
30%
3%
Number of unique sequences
Fraction of theoretical maximum
10^7
10^6
10^6
10^7
10^8
Ligation
PCR Recovery
Final Library
Total number of sequences