

Multiple mutations (using the stratagene multi kit):

1. 10x buf: 2.5
2. DNA(template, miniprep): 1, 1(1/2), 1(1/5), 1(1/10)
3. primer1 (100ng/ul): 1
4. primer2 (100ng/ul): 1
5. primer3 (100ng/ul): 1
6. dntp_mix: 1
7. Enzyme: 1
8. H2O: add until total 25 ul =16.5

Mix

Mix 10x buf, primer1,2,3, H2O together, for 5 groups: $2.5 \times 5 = 12.5$, $1 \times 5 = 5$, $1 \times 5 = 5$, $1 \times 5 = 5$, $16.5 \times 5 = 82.5$, aliquote $2.5 + 16.5 + 1 + 1 + 1 = 22$ to each tube, add DNA, DNTP, Enzyme, 1, 1, 1.

Run Prset_multi

1. cycle 1, 95oC, 1 min
2. cycle 30, 95oC, 1min
 - 55oC, 1min
 - 65oC, 12 min

group 4 gives the best results.