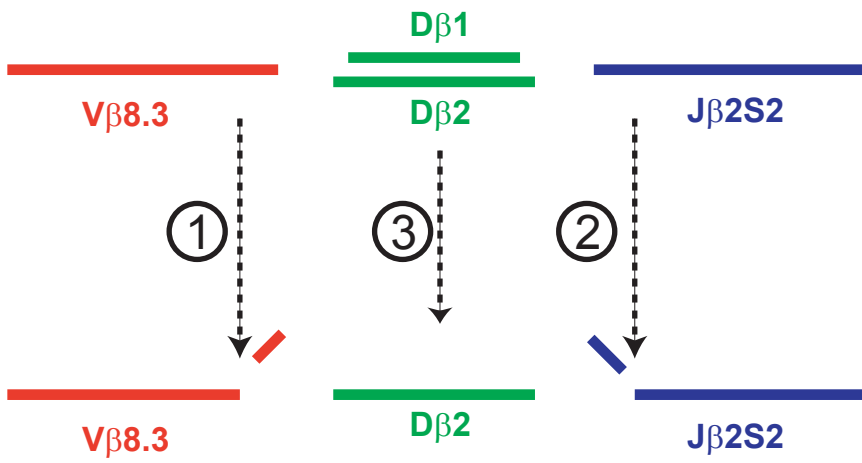
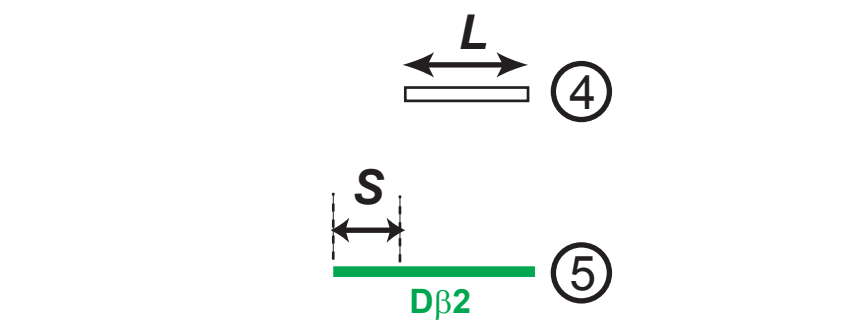


Germline sequences



1. Trim V β (0 to 10 nt)
2. Trim J β (0 to 10 nt)
3. Choose D β 1 / D β 2



4. Choose length of D β fragment ' L ' (0 to 14 nt)
5. Choose starting position of D β fragment ' S ' (0 to [14 - L] from 5' end)



6. Trimmed germline sequences



7. Choose combined length of random nucleotide insertion ' N ' (0 to 10 nt)



8. Divide insertion between V β / D β and D β / J β joints (0 to N)



9. Choose DNA bases of random nucleotide additions



10. Join segments together