

Supplementary Table 4: Enriched *TCRB* sequences in RA synovial biopsies

| <i>TCRB</i> CDR3 sequences                                             | Shared between pair | Patient ID |
|------------------------------------------------------------------------|---------------------|------------|
| TRBV_6_TGTGCCAGCAGTTACTCCGAGACCAGGGCCAACGTCCTGACTTTC_TRBJ2-6           | Y                   | 1          |
| TRBV_10_TGCGCCAGCAGTGAGTCGTCGACGGTGCTTACGAGCAGTACTTC_TRBJ2-7           | Y                   | 1          |
| TRBV_27_TGTGCCAGCAGTCCTGGCCAGATCGGCTCCTACAATGAGCAGTTCTTC_TRBJ2-1       | Y                   | 1          |
| TRBV_12_TGTGCCAGCAGTTTGTACAGGGGAGAGAACTGTTTTTT_TRBJ1-4                 | Y                   | 1          |
| TRBV_6_TGTGCCAGCAGTTACCGGGGGCAGAACACTGAAGCTTTCTTT_TRBJ1-1              | Y                   | 1          |
| TRBV_6_TGTGCCAGCAGTGACTTCGCGGGGCCCCACAGATACGCAGTATTTT_TRBJ2-3          | Y                   | 2          |
| TRBV_27_TGTGCCAGCAGTTCCGGGCCGACTAGCGGGCTACAATGAGCAGTTCTTC_TRBJ2-1      | Y                   | 2          |
| TRBV_5_TGTGCCAGCAGCCCTGGACAGGGAGCGAGCAGTACTTC_TRBJ2-7                  | Y                   | 2          |
| TRBV_10_TGCGCCAGCAGTGAGCCGGGACGGAATTCTGAAGCTTTCTTT_TRBJ1-1             | Y                   | 2          |
| TRBV_19_TGTGCCAGTAGCCTAAACGGACAGGGGTGGTACTACGAGCAGTACTTC_TRBJ2-7       | Y                   | 2          |
| TRBV_24_TGTGCCACCACTGATTGCGGAGGGGCGGAGAGACCCAGTACTTC_TRBJ2-5           | Y                   | 2          |
| TRBV_29_TGCAGCGTTGAGGACAGGATTTGGCTCAAGAGACCCAGTACTTC_TRBJ2-5           | Y                   | 2          |
| TRBV_19_TGTGCCAGTAGTATGTCTCCGTGAACACTGAAGCTTTCTTT_TRBJ1-1              | Y                   | 2          |
| TRBV_7_TGTGCCAGCAGCTTGTCGGGCCCGAGGCGAACTATGGCTACACCTTC_TRBJ1-2         | Y                   | 2          |
| TRBV_10_TGTGCCATCAGCGACGCGGGGAGCGGTCCCGACAATGAGCAGTTCTTC_TRBJ2-1       | Y                   | 2          |
| TRBV_6_TGTGCCAGCAGTTACTCGAGGGTGTCCAGATACGCAGTATTTT_TRBJ2-3             | Y                   | 2          |
| TRBV_19_TGTGCCAGTAGTATAGATAGGTGGAGCTCCTACAATGAGCAGTTCTTC_TRBJ2-1       | Y                   | 3          |
| TRBV_7_TGTGCCAGCAGCGGAAGGCGGGGGCCCCAAGAGACCCAGTACTTC_TRBJ2-5           | Y                   | 3          |
| TRBV_6_TGTGCCAGCAGTCCAGACAGCAACGTCCTGACTTTC_TRBJ2-6                    | Y                   | 4          |
| TRBV_11_TGTGCCAGCAGTCCGAGGGGACTAGCGTGACAGATACGCAGTATTTT_TRBJ2-3        | Y                   | 4          |
| TRBV_12_TGTGCCAGCAGTTTAGGAGGGACTAGCGGGAGATTTGGTAATGAGCAGTTCTTC_TRBJ2-1 | Y                   | 4          |
| TRBV_28_TGTGCCAGCAGTTTACGGGGCAGGGCCCGGTCTACTGAAGCTTTCTTT_TRBJ1-1       | Y                   | 4          |
| TRBV_5_TGTGCCAGCAGCTTTTCCATCGGGACAGGGATTGAGCAGTTCTTC_TRBJ2-1           | Y                   | 4          |
| TRBV_6_TGTGCCAGCAGTGAACAGGCCGGGAGCAGATACGCAGTATTTT_TRBJ2-3             | Y                   | 4          |
| TRBV_6_TGTGCCAGCAGGCCACCGGAGGCGTTGGTAGCTTTCTTT_TRBJ1-1                 | Y                   | 4          |
| TRBV_7_TGTGCCAGCAGCTTAGTGTCTAGCAACAATGAGCAGTTCTTC_TRBJ2-1              | Y                   | 4          |
| TRBV_7_TGTGCCAGCAGCTTAGCCCCGGGGAGCTACGAGCAGTACTTC_TRBJ2-7              | Y                   | 4          |
| TRBV_7_TGTGCCAGCAGCGCTAGCGGGAGCAGATACGCAGTATTTT_TRBJ2-3                | Y                   | 4          |
| TRBV_9_TGTGCCAGCAGCGTAGCGGGGGATCAACCGGGGAGCTGTTTTTT_TRBJ2-2            | Y                   | 4          |
| TRBV_3_TGTGCCAGCAGCCAAGCCAACCGGGACAGGGGTACGAGCAGTACTTC_TRBJ2-7         | N                   | 5          |
| TRBV_7_TGTGCCAGCAGTCCCGTAGGAGGGAAAAATTACCCCTCCACTTT_TRBJ1-6            | N                   | 5          |
| TRBV_3_TGTGCCAGCAGCCCTCAATCCAATGAGCAGTTCTTC_TRBJ2-1                    | N                   | 5          |
| TRBV_28_TGTGCCAGCAGCCATAATCAGCCCCAGCATTTT_TRBJ1-5                      | Y                   | 5          |
| TRBV_19_TGTGCCACTCTTCCAAACAGAACTATGGCTACACCTTC_TRBJ1-2                 | Y                   | 5          |
| TRBV_7_TGTGCCAGAGGACAGGGGTTAACACCGGGGAGCTGTTTTTT_TRBJ2-2               | Y                   | 5          |
| TRBV_7_TGTGCCAGCAGCTTGGGAGGCACTGAAGCTTTCTTT_TRBJ1-1                    | N                   | 6          |
| TRBV_11_TGTGCCAGCAGCCCACGCGGGAGGAGTCGCGGTGCGAGAATGAGCAGTTCTTC_TRBJ2-1  | N                   | 6          |
| TRBV_7_TGTGCCAGCAGCCCCGACCGACAGGGGTGGGGGCCAACGTCCTGACTTTC_TRBJ2-6      | N                   | 6          |
| TRBV_7_TGTGCCAGCAGTCAGGGGATTTGAACACTGAAGCTTTCTTT_TRBJ1-1               | N                   | 6          |
| TRBV_7_TGTGCCAGCAGCCTGGGAGGTACTGAAGCTTTCTTT_TRBJ1-1                    | N                   | 6          |
| TRBV_19_TGTGCCAGTAGTCTCTGGCGGGGTCTAGCGGGACCTACAATGAGCAGTTCTTC_TRBJ2-1  | N                   | 6          |
| TRBV_20_TGCAGTGCTAGTCTAGCGGGAGGAACAGATACGCAGTATTTT_TRBJ2-3             | N                   | 6          |
| TRBV_4_TGCGCCAGCAGCCAAGATGGCGGGGCCGGGAGCTGTTTTTT_TRBJ2-2               | N                   | 6          |

|                                                                     |   |    |
|---------------------------------------------------------------------|---|----|
| TRBV_14_TGTGCCAGCAGCCAAGGTCGACTTGGGGGAAACATTAGTACTTC_TRBJ2-4        | N | 6  |
| TRBV_4_TGCGCCAGCAGCTACCGACAGGGGTACTCTGGGGCCAACGTCCTGACTTC_TRBJ2-6   | Y | 6  |
| TRBV_4_TGCGCCAGCAGCCAAGACCCAGCATGAACACTGAAGCTTCTTT_TRBJ1-1          | Y | 6  |
| TRBV_9_TGTGCCAGCAGCGGGACTTTCGGGACAGGGTTCGGAGATACGCAGTATTTT_TRBJ2-3  | Y | 6  |
| TRBV_7_TGTGCCAGCAGCCTACGTTCTCGGAGGATACGCAGTATTTT_TRBJ2-3            | N | 7  |
| TRBV_28_TGTGCCAGCACCGAAGGACTAGCGGGAGTACAGTTCTACGAGCAGTACTTC_TRBJ2-7 | Y | 7  |
| TRBV_11_TGTGCCAGCAGCCGGGACAACATAATGAGCAGTCTTC_TRBJ2-1               | Y | 7  |
| TRBV_6_TGTGCCAGCAGTTACACCCCTGGGCGGGAGGCCCAATGAGCAGTCTTC_TRBJ2-1     | Y | 7  |
| TRBV_9_TGTGCCAGCAGCGTAGGCCGGGGCTTCTACAATGAGCAGTCTTC_TRBJ2-1         | Y | 7  |
| TRBV_7_TGTGCCAGCAGCTCCGGACAACCTTCCGGTTACGAGCAGTACTTC_TRBJ2-7        | Y | 7  |
| TRBV_13_TGTGCCAGCAGCTTAGGTACGCGTCAGCAGTACTTC_TRBJ2-7                | Y | 7  |
| TRBV_9_TGTGCCAGCAGCAAGACCTCCAGGGGAACGAACACCGGGAGCTGTTTTTT_TRBJ2-2   | N | 8  |
| TRBV_15_TGTGCCACCAAGCAGAGATACTAGCGTGACACAGATACGCAGTATTTT_TRBJ2-3    | N | 8  |
| TRBV_28_TGTGCCAGCAGACCAGCGGGGATTAACACGAGCAGTACTTC_TRBJ2-7           | N | 8  |
| TRBV_10_TGTGCCATCAGTTTACAGGGAGGCGGCAATCAGCCCAGCATTTT_TRBJ1-5        | N | 8  |
| TRBV_5_TGTGCCAGCAGCTTCGTGAGTTCCACAGATACGCAGTATTTT_TRBJ2-3           | N | 8  |
| TRBV_7_TGTGCCAGCAGCGAGAACAGAGACAATGAGCAGTCTTC_TRBJ2-1               | N | 8  |
| TRBV_20_TGCAGTGCTGGCGTTCTAGCTCCTACGAGCAGTACTTC_TRBJ2-7              | N | 8  |
| TRBV_6_TGTGCCAGCAGTGCTCTAGCGGGAGGGTCGCAAGAGACCCAGTACTTC_TRBJ2-5     | N | 8  |
| TRBV_6_TGTGCCAGCAGTTTAAGGGGCAACGAGCAGTCTTC_TRBJ2-1                  | N | 8  |
| TRBV_5_TGCGCCAGCAGCCCGCGCGGTGGATACAATGAGCAGTCTTC_TRBJ2-1            | N | 8  |
| TRBV_28_TGTGCCAGCAATACGCTAGCGGTCTCCTCTACAATGAGCAGTCTTC_TRBJ2-1      | N | 8  |
| TRBV_6_TGTGCCAGCAGTTACAGTACGAGGAGAGGACGAGCAGTACTTC_TRBJ2-7          | N | 8  |
| TRBV_5_TGTGCCAGCAGCTTGGACAGCTTAGCACAGATACGCAGTATTTT_TRBJ2-3         | N | 8  |
| TRBV_27_TGTGCCAGCAGTTTAGCCGATTGGACAGATACGCAGTATTTT_TRBJ2-3          | Y | 8  |
| TRBV_7_TGTGCCAGCAGCTCAGACATCGGTGGCTACACCTTC_TRBJ1-2                 | Y | 8  |
| TRBV_12_TGTGCCAGCAGCCACCCGTCGGGACAGGGAAATTCACCCCTCACTTT_TRBJ1-6     | Y | 8  |
| TRBV_19_TGTGCCAGTAGTATGGGGCAGGTAGTCAATCAGCCCCAGCATTTT_TRBJ1-5       | Y | 8  |
| TRBV_5_TGCGCCAGCAGCACAGACAGGGTTGGCCAAGAGACCCAGTACTTC_TRBJ2-5        | Y | 8  |
| TRBV_3_TGTGCCAGCAGCCAAGATGATCGGGGAGGTCAGCCCCAGCATTTT_TRBJ1-5        | Y | 8  |
| TRBV_7_TGTGCCAGCAGCTTAGACGGGGGACTAATGAAAACTGTTTTTT_TRBJ1-4          | Y | 8  |
| TRBV_27_TGTGCCAGCAGTGGACTAGCGGGGCGGGATGAGCAGTCTTC_TRBJ2-1           | N | 9  |
| TRBV_20_TGCAGTGCTACCGGAGGGTGGCAGCGCAATCAGCCCCAGCATTTT_TRBJ1-5       | N | 9  |
| TRBV_9_TGTGCCAGCAGCGTAGCGGGGCGGGGGCCAGATACGCAGTATTTT_TRBJ2-3        | N | 9  |
| TRBV_3_TGTGCCAGCAGCCAAACAGGGTTCGGGGAGCTGTTTTTT_TRBJ2-2              | N | 9  |
| TRBV_28_TGTGCCAGCAGCTTTCAGGGTCTACGAGCAGTACTTC_TRBJ2-7               | N | 9  |
| TRBV_12_TGTGCCAGCAGTTTAGCCCCCATTTGGTGAACACTGAAGCTTCTTT_TRBJ1-1      | N | 9  |
| TRBV_12_TGTGCCAGCAGCCCGCGGGGATAAGCACAGATACGCAGTATTTT_TRBJ2-3        | N | 9  |
| TRBV_6_TGTGCCAGCAGTTCCTCCGTAGTGGGCAATCAGCCCCAGCATTTT_TRBJ1-5        | Y | 9  |
| TRBV_5_TGCGCCAGCAGCTGGGGACAGGGCGTAGGTGAAAACTGTTTTTT_TRBJ1-4         | Y | 9  |
| TRBV_30_TGTGCTGGAGTGTTGGGGACAGGGCTAGCCAAAAACATTAGTACTTC_TRBJ2-4     | Y | 9  |
| TRBV_7_TGTGCCAGCAGCTTATGGAATTCCTACGAGCAGTACTTC_TRBJ2-7              | Y | 9  |
| TRBV_20_TGCAGAGTTTCGGGGAGTATCCACGAGACCCAGTACTTC_TRBJ2-5             | N | 10 |
| TRBV_7_TGTGCCAGCAGCTCGGGACGGCTTCTGGGTTACCCCTCCACTTT_TRBJ1-6         | N | 10 |
| TRBV_6_TGTGCCAGTGGGGACAGAGCCTCACACCATGGCTACACCTTC_TRBJ1-2           | N | 10 |
| TRBV_19_TGTGCCAGTAGTAAAACTAGCGGTAGTTACAATGAGCAGTCTTC_TRBJ2-1        | Y | 10 |
| TRBV_19_TGTGCCAGTAGTTCGACTAGCGGGAGTGTGAATGAGCAGTCTTC_TRBJ2-1        | Y | 10 |