

Table S4: Virus-specific clonotypes.

| ID  | HLA-A    | CDR3 amino acid | TRBV     | TRBJ    | Phenotype | Frequency | Trimmed CDR3  | TRBV        | TRBJ       | HLA         | organism  | antigen   |
|-----|----------|-----------------|----------|---------|-----------|-----------|---------------|-------------|------------|-------------|-----------|-----------|
| 738 | HLA-A*02 | CASSLGQGPYEQYF  | TRBV11-2 | TRBJ2-7 | CD8       | 0.53      | ASSLGQGPYEQYF | TRBV11-2*01 | TRBJ2-7*01 | HLA-A*11:01 | HHV4      | IVTDFSVIK |
|     | HLA-A*11 | CASSIRSGETQYF   | TRBV19   | TRBJ2-5 | CD8       | 0.08      | ASSIRSGETQY   | TRBV19*01   | TRBJ2-5*01 | HLA-A*02:01 | influenza | GILGFVFTL |
|     |          | CASSLRSSYEYF    | TRBV19   | TRBJ2-7 | CD8       | 0.08      | ASSLRSSYEY    | TRBV19*01   | TRBJ2-7*01 | HLA-A*02:01 | influenza | GILGFVFTL |
|     |          | CASSRDIEAFF     | TRBV7-9  | TRBJ1-1 | CD8       | 0.08      | ASSRDIEAF     | TRBV7-9*01  | TRBJ1-1*01 | HLA-A*02:01 | SARS-CoV2 | YLQPRTFLL |
| 754 | HLA-A*03 | CASRGLNTEAFF    | TRBV7-2  | TRBJ1-1 | Treg      | 0.05      | ASRGLNTEAF    | TRBV7-2*01  | TRBJ1-1*01 | HLA-A*03:01 | HHV5      | KLGGALQAK |
|     | HLA-A*02 | CASSVEDSSYNEQFF | TRBV9    | TRBJ2-1 | CD8       | 0.05      | ASSVEDSSYNEQF | TRBV9*01    | TRBJ2-1*01 | HLA-A*03:01 | HHV5      | KLGGALQAK |
|     |          | CASSVGNTIYF     | TRBV9    | TRBJ1-3 | CD8       | 0.09      | ASSVGNTIY     | TRBV9*01    | TRBJ1-3*01 | HLA-A*03:01 | HHV5      | KLGGALQAK |
| 769 | HLA-A*03 | CASSDGTGGYNEQFF | TRBV6-4  | TRBJ2-1 | CD8       | 0.071     | ASSDGTGGYNEQF | TRBV6-4*01  | TRBJ2-1*01 | HLA-A*03:01 | HHV5      | KLGGALQAK |
|     | HLA-A*31 | CASSLSTDTQYF    | TRBV5-4  | TRBJ2-3 | Treg      | 0.071     | ASSLSTDTQY    | TRBV5-4*01  | TRBJ2-3*01 | HLA-A*03:01 | HHV5      | KLGGALQAK |

Table S5: Clonotypes predicted to recognize the same epitopes.

| ID  | CDR3                    | TRBV     | TRBVJ   | Phenotype | Frequency |
|-----|-------------------------|----------|---------|-----------|-----------|
| 738 | CASSL <b>G</b> QGPYEQYF | TRBV11-2 | TRBJ2-7 | CD8       | 0.53      |
| 769 | CASSL <b>R</b> QGPYEQYF | TRBV11-2 | TRBJ2-7 | CD8       | 0.07      |
| 738 | CAI <b>S</b> GSTDTQYF   | TRBV10-3 | TRBJ2-3 | Not known | 0.08      |
| 754 | CASS <b>G</b> SSTDTQYF  | TRBV28   | TRBJ2-3 | Not known | 0.05      |
| 769 | CASSL <b>L</b> SSTDTQYF | TRBV5-4  | TRBJ2-3 | Treg      | 0.07      |