**Supplementary file 1. Genetic characteristics of isolated antibodies.** Sequences were analyzed using the IMGT database. Lambda-antibodies are listed over a yellow background and kappa-antibodies over a blue background. V region identity is indicated as a percentage of nucleotides. Antibodies that differ from one another solely through their light chain are indicated using dashed lines (B1C5L/K, B1C8L/K and B1D3L/K).

|  |  |  |
| --- | --- | --- |
|   | Heavy Chain | Light Chain |
| mAb | V gene | J gene | CDR3 length | V region identity % | V gene | J gene | CDR3 length  | V region identity %  |
| B1C5L |  IGHV1-8\*01  |  IGHJ5\*02  | 16 | 93.06% |  IGLV1-44\*01  |  IGLJ3\*02  | 11 | 95.44% |
| B1C5K |  IGHV1-8\*01  |  IGHJ5\*02  | 16 | 93.06% |  IGKV1-5\*03  |  IGKJ2\*02  | 9 | 89.73% |
| B2C10L |  IGHV1-2\*02  |  IGHJ5\*02  | 11 | 93.09% |  IGLV2-11\*01  |  IGLJ1\*01  | 9 | 96.53% |
| B2E9L |  IGHV3-33\*01  |  IGHJ4\*02  | 17 | 96.53% |  IGLV1-51\*02  |  IGLJ2\*01  | 10 | 95.79% |
| B1C8L |  IGHV4-61\*02  |  IGHJ5\*02  | 11 | 80.70% |  IGLV1-51\*02  |  IGLJ2\*01  | 11 | 86.67% |
| B1C8K |  IGHV4-61\*02  |  IGHJ5\*02  | 11 | 80.70% |  IGKV3-15\*01  |  IGKJ1\*01  | 10 | 96.42% |
| B1D3L |  IGHV1-18\*01  | IGHJ6\*03 F | 21 | 91.67% |  IGLV1-47\*01  | IGLJ3\*02 | 10 | 88.41% |
| B1D3K |  IGHV1-18\*01  | IGHJ6\*03 F | 21 | 91.67% |  IGKV2D-29\*01  |  IGKJ1\*01  | 9 | 97.62% |
| B1F9K |  IGHV4-4\*07  |  IGHJ2\*01  | 14 | 58.22% |  IGKV1-12\*01  |  IGKJ3\*01  | 9 | 100% |
| B1E7K |  IGHV3-33\*01  |  IGHJ4\*02  | 17 | 95.14% |  IGKV3-11\*01  |  IGKJ2\*04  | 10 | 97.47% |
| B1C3L |  IGHV4-4\*07  |  IGHJ5\*02  | 17 | 100.00% |  IGLV2-14\*01  |  IGLJ2\*01  | 10 | 90% |
| B2D10L |  IGHV4-34\*03  |  IGHJ5\*02  | 22 | 85.61% |  IGLV3-1\*01  |  IGLJ2\*01  | 10 | 96.06% |
| B2F7L |  IGHV3-74\*03  |  IGHJ4\*02  | 19 | 85.42% |  IGLV2-8\*01  |  IGLJ1\*01  | 10 | 100% |
| B1E11K |  IGHV3-7\*01  |  IGHJ4\*01  | 9 | 90.74% |  IGKV3-20\*01  |  IGKJ2\*04  | 9 | 90.20% |