CLAIMS

1. A monoclonal antibody, or an antigen binding fragment thereof, that binds to an epitope in the human cytomegalovirus (hCMV) UL128 protein, wherein the antibody neutralizes hCMV infection.

2. The antibody of claim 1, wherein the concentration of antibody required for 90% neutralisation of hCMV is 1 μg/ml or less.

3. The antibody of claim 1, wherein the concentration of antibody required for 90% neutralisation of hCMV is 0.1 μg/ml or less.

4. An antibody, or an antigen binding fragment thereof, that binds to an epitope formed by the hCMV proteins gH, gL, UL128 and UL130, the hCMV proteins UL128, UL130 and UL131A, or the hCMV proteins UL130 and UL131A, wherein the antibody neutralizes hCMV infection.

5. An antibody, or an antigen binding fragment thereof, comprising at least one complementarity determining region (CDR) sequence having at least 95% sequence identity to any one of SEQ ID NOs: 188-193, 204, 205, 210, 174-177, 149, 178, 65-70, 81-86, 97-102, 129-134, 145-150, 113, 161-164, 1-6, 17-22, 33-38, 49-54, or 114-118, wherein the antibody neutralizes hCMV infection.

6. An antibody, or an antigen binding fragment thereof, comprising a heavy chain CDR1 selected from the group consisting of SEQ ID NOs: 188, 174, 65, 81, 97, 129, 145, 113, 1, 17, 33, and 49; a heavy chain CDR2 selected from the group consisting of SEQ ID NOs: 189, 204, 175, 66, 82, 98, 130, 146, 161, 2, 2, 18, 34, 50, and 114; and a heavy chain CDR3 selected from the group consisting of SEQ ID NOs: 190, 205, 210, 176, 67, 83, 99, 131, 147, 162, 3, 19, 35, 51, and 115, wherein the antibody neutralizes hCMV infection.

7. An antibody, or an antigen binding fragment thereof, comprising a light chain CDR1 selected from the group consisting of SEQ ID NOs: 191, 177, 68, 84, 100, 132, 148, 163, 4, 20, 36, 52, and 116; a light chain CDR2 selected from the group consisting of SEQ ID NOs: 192, 149, 69, 85, 101, 133, 5, 21, 37, 53, and 117; and a light chain CDR3 selected from the group consisting of SEQ ID NOs: 193, 178, 70, 86, 102, 134,150, 164, 6, 22, 38, 54, and 118, wherein the antibody neutralizes hCMV infection.

8. The antibody of claim **6 or 7**, comprising a heavy chain comprising SEQ ID NO: 188 for CDRH1, SEQ ID NO: 189 for CDRH2, SEQ ID NO: 190 for CDRH3; or SEQ ID NO: 188 for CDRH1, SEQ ID NO; 204 for CDRH2, SEQ ID NO: 205 for CDRH3; or SEQ ID NO; 188 for CDRH1, SEQ ID NO: 189 for CDRH2, SEQ ID NO: 210 for CDRH3; or SEQ ID NO: 174 for CDRH1, SEQ ID NO: 175 for CDRH2, SEQ ID NO: 176 for CDRH3; or SEQ ID NO: 65 for CDRH1, SEQ ID NO: 66 for CDRH2, SEQ ID NO: 67 for CDRH3; or SEQ ID NO: 81 for CDRH1, SEQ ID NO 82 for CDRH2, SEQ ID NO: 83 for CDRH3; or SEQ ID NO: 97 for CDRH1, SEQ ID NO: 98 for CDRH2, SEQ ID NO: 99 for CDRH3; or SEQ ID NO: 129 for CDRH1, SEQ ID NO: 130 for CDRH2, SEQ ID NO: 131 for CDRH3; or SEQ ID NO: 145 for CDRH1, SEQ ID NO: 146 for CDRH2, SEQ ID NO: 147 for CDRH3; or SEQ ID NO: 113 for CDRH1, SEQ ID NO: 161 for CDRH2, SEQ ID NO: 162 for CDRH3; or SEQ ID NO: 1 for CDRH1, SEQ ID NO: 2 for CDRH2, SEQ ID NO: 3 for CDRH3; or SEQ ID NO; 17 for CDRH1, SEQ ID NO; 18 for CDRH2, SEQ ID NO: 19 for CDRH3; or SEQ ID NO: 33 for CDRH1, SEQ ID NO: 34 for CDRH2, SEQ ID NO: 35 for CDRH3; or SEQ ID NO 49 for CHRH1, SEQ ID NO: 50 for CHRH2, SEQ ID NO: 51 for CDRH3; or SEQ ID NO: 113 for CDRH1, SEQ ID NO: 114 for CDRH2, SEQ ID NO: 115 for CDRH3.

9. The antibody of claim **6-8**, comprising a light chain comprising SEQ ID NO: 191 for CDRL1, SEQ ID NO: 192 for CDRL2; SEQ ID NO: 193 for CDRL3; or SEQ ID NO: 177 for CDRL1, SEQ ID NO: 149 for CDRL2, SEQ ID NO: 178 for CDRL3; or SEQ ID NO: 68 for CDRL1, SEQ ID NO: 69 for CDRL2, SEQ ID NO: 70 for CDRL3; or SEQ ID NO 84 for CDRL1, SEQ ID NO: 85 for CDRL2, SEQ ID NO: 86 for CDRL3; or SEQ ID NO: 100 for CDRL1, SEQ ID NO: 101 for CDRL2, SEQ ID NO: 102 for CDRL3; or SEQ ID NO: 132 for CDRL1, SEQ ID NO: 133 for CDRL2, SEQ ID NO: 134 for CDRL3; or SEQ ID NO: 148 for CDRL1, SEQ ID NO: 149 for CDRL2, SEQ ID NO: 150 for CDRL3; or SEQ ID NO: 163 for CDRL1, SEQ ID NO: 149 for CDRL2 and SEQ ID NO: 164 for CDRL3; or SEQ ID NO: 4 for CDRL1, SEQ ID NO: 5 for CDRL2 and SEQ ID NO: 6 for CDRL3; or SEQ ID NO: 20 for CDRL1, SEQ ID NO: 21 for CDRL2, SEQ ID NO: 22 for CDRL3; or SEQ ID NO; 36 for CDRL1, SEQ ID NO: 37 for CDRL2, SEQ ID NO: 38 for CDRL3; or SEQ ID NO: 52 for CDRL1, SEQ ID NO: 53 for CDRL2, SEQ ID NO: 54 for CDRL3; or SEQ ID NO: 116 for CDRL1, SEQ ID NO: 117 for CDRL2, SEQ ID NO: 118 for CDRL3.

10. The antibody of any one of claims **1-9**, or an antigen binding fragment thereof, comprising a heavy chain variable region having at least 80% sequence identity to any one of SEQ ID NOs: 200, 208, 212, 184, 77, 93, 109, 141, 157, 170, 13, 29, 45, 61, or 125.

11. The antibody of any one of claims **1-9**, or an antigen binding fragment thereof, comprising a light chain variable region having at least 80% sequence identity to any one of SEQ ID NOs: 201, 213, 185, 78, 94, 110, 142, 158, 171, 14, 30, 46, 62, or 126.

12. The antibody of any one of claims **1-9**, or an antigen binding fragment thereof, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence of any one of SEQ ID NO: 200, SEQ ID NO: 208, SEQ ID NO: 212, SEQ ID NO: 184, SEQ ID NO: 77, SEQ ID NO: 93, SEQ ID NO: 109, SEQ ID NO: 141, SEQ ID NO: 157, SEQ ID NO: 170, SEQ ID NO: 13, SEQ ID NO: 29, SEQ ID NO: 45, SEQ ID NO: 61, or SEQ ID NO: 125; and wherein the antibody comprises a light chain variable region comprising the amino acid sequence of any one of SEQ ID NO: 201, SEQ ID NO: 213, SEQ ID NO: 185, SEQ ID NO: 78, SEQ ID NO: 94, SEQ ID NO: 110, SEQ ID NO: 142, SEQ ID NO: 158, SEQ ID NO: 171, SEQ ID NO: 14, SEQ ID NO: 30, SEQ ID NO: 46, SEQ ID NO: 62, or SEQ ID NO: 126.

13. An antibody, or an antigen binding fragment thereof, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 200 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 201; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 200 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 213; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 208 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 201; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 208 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 213; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 212 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 201; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 212 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 213; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 184 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 185; or a heavy chain variable region comprising the amino

acid sequence of SEQ ID NO: 77 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 78; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 93 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 94; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 109 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 110; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 141 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 142; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 157 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 158; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 170 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 171; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 13 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 14; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 29 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 30; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 45 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 46; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 61 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 62; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 125 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 126, wherein the antibody neutralizes hCMV infection.

14. An antibody, or an antigen binding fragment thereof, that neutralizes infection of endothelial cells, epithelial cells, retinal cells, myeloid cells, dendritic cells, fibroblasts, or mesenchymal stromal cells by a clinical isolate of hCMV, wherein the concentration of antibody required for 90% neutralisation of hCMV is 1.2 μg/ml or less.

15. An antibody, or an antigen binding fragment thereof, that neutralizes infection of endothelial cells, epithelial cells, retinal cells, myeloid cells, dendritic cells, fibroblasts, or mesenchymal stromal cells by a clinical isolate of hCMV, wherein the concentration of antibody required for 90% neutralisation of hCMV is 10 μg/ml or less, and wherein the antibody is not MSL-109 or 8F9.

16. The antibody of any one of claims **14 or 15**, or an antigen binding fragment thereof, wherein the antibody binds to an epitope in the hCMV protein gH or gB, or an epitope formed by the hCMV proteins gM and gN.

17. An antibody, or an antigen binding fragment thereof, comprising at least one CDR sequence having at least 95% sequence identity to any one of SEQ ID NOs: 216-221, 232-235, 149, 236, 246-251, 278-283, 296-301, 312, 316-321, 332, 336-341, 352, 360, 361, or 262-267, wherein the antibody neutralizes hCMV infection.

18. An antibody, or an antigen binding fragment thereof, comprising a heavy chain CDR1 selected from the group consisting of SEQ ID NOs: 216, 232, 246, 278, 296, 316, 336, 352, 360 and 262; a heavy chain CDR2 selected from the group consisting of SEQ ID NOs: 217, 233, 247, 279, 297, 312, 317, 337 and 263; and a heavy chain CDR3 selected from the group consisting of SEQ ID NOs: 218, 234, 248, 280, 298, 318, 332, 338, and 264, wherein the antibody neutralizes hCMV infection.

19. An antibody, or an antigen binding fragment thereof, comprising a light chain CDR1 selected from the group consisting of SEQ ID NOs: 219, 235, 249, 281, 299, 319, 339 and 265; a light chain CDR2 selected from the group consisting of SEQ ID NOs: 220, 149, 250, 282, 300, 320, 340 and 266; and a light chain CDR3 selected from the group consisting of SEQ ID NOs: 221, 236, 251, 283, 301, 321, 341, 361 and 267, wherein the antibody neutralizes hCMV infection.

20. The antibody of claim **18 or 19**, comprising a heavy chain comprising SEQ ID NO: 216 for CDRH1, SEQ ID NO: 217 for CDRH2, SEQ ID NO: 218 for CDRH3; or SEQ ID NO: 232 for CDRH1, SEQ ID NO: 233 for CDRH2, SEQ ID NO: 234 for CDRH3; or SEQ ID NO: 246 for CDRH1, SEQ ID NO: 247 for CDRH2, SEQ ID NO: 248 for CDRH3; or SEQ ID NO: 278 for CDRH1, SEQ ID NO: 279 for CDRH2, SEQ ID NO: 280 for CDRH3; or SEQ ID NO: 296 for CDRH1, SEQ ID NO: 297 for CDRH2, SEQ ID NO: 298 for CDRH3; or SEQ ID NO: 296 for CDRH1, SEQ ID NO: 312 for CDRH2, SEQ ID NO: 298 for CDRH3; or SEQ ID NO: 316 for CDRH1, SEQ ID NO: 317 for CDRH2, SEQ ID NO: 318 for CDRH3; or SEQ ID NO: 316 for CDRH1, SEQ ID NO: 317 for CDRH2, and SEQ ID NO: 332 for CDRH3; or SEQ ID NO: 336 for CDRH1, SEQ ID NO: 337 for CDRH2, SEQ ID NO: 338 for CDRH3; or SEQ ID NO: 352 for CDRH1, SEQ ID NO: 279 for CDRH2, SEQ ID NO: 280 for CDRH3; or SEQ ID NO: 360 for CDRH1, SEQ ID NO: 279 for CDRH2, SEQ ID NO: 280 for CDRH3; SEQ ID NO: 262 for CDRH1, SEQ ID NO: 263 for CDRH2, SEQ ID NO: 264 for CDRH3.

21. The antibody of any one of claims **18-20**, comprising a light chain comprising SEQ ID NO: 219 for CDRL1, SEQ ID NO: 220 for CDRL2, SEQ ID NO: 221 for CDRL3; or SEQ ID NO: 235 for CDRL1, SEQ ID NO: 149 for CDRL2, SEQ ID NO: 236 for CDRL3; or SEQ ID NO: 249 for CDRL1, SEQ ID NO: 250 for CDRL2, SEQ ID NO: 251 for CDRL3; or SEQ ID NO: 281 for CDRL1, SEQ ID NO: 282 for CDRL2, SEQ ID NO: 283 for CDRL3; or SEQ ID NO: 299 for CDRL1, SEQ ID NO: 300 for CDRL2, SEQ ID NO: 301 for CDRL3; or SEQ ID NO: 319 for CDRL1, SEQ ID NO: 320 for CDRL2, SEQ ID NO: 321 for CDRL3; or SEQ ID NO: 339 for CDRL1, SEQ ID NO: 340 for CDRL2, SEQ ID NO: 341 for CDRL3; SEQ ID NO: 281 for CDRL1, SEQ ID NO: 282 for CDRL2, SEQ ID NO: 361 for CDRL3; or SEQ ID NO: 265 for CDRL1, SEQ ID NO: 266 for CDRL2, SEQ ID NO: 267 for CDRL3.

22. The antibody of any one of claims **14-21**, or an antigen binding fragment thereof, comprising a heavy chain variable region having at least 80% sequence identity to SEQ ID NO: 228, 242, 258, 290, 294, 308, 314, 328, 334, 348, 357, 367 or 274.

23. The antibody of any one of claims **14-21**, or an antigen binding fragment thereof, comprising a light chain variable region having at least 80% sequence identity to SEQ ID NO: 229, 243, 259, 291, 309, 329, 349, 368 or 275.

24. The antibody of any one of claims **14-21**, or an antigen binding fragment thereof, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence of any one of SEQ ID NO: 228, SEQ ID NO: 242, SEQ ID NO: 258, SEQ ID NO: 290, SEQ ID NO: 294, SEQ ID NO: 308, SEQ ID NO: 314, SEQ ID NO: 328, SEQ ID NO: 334, SEQ ID NO: 348, SEQ ID NO: 357, SEQ ID NO: 367 or SEQ ID NO: 274; and wherein the antibody comprises a light chain variable region comprising the amino acid sequence of any one of SEQ ID NO: 229, SEQ ID NO: 243, SEQ ID NO: 259, SEQ ID NO: 291, SEQ ID NO: 309, SEQ ID NO: 329, SEQ ID NO: 349, SEQ ID NO: 368 or SEQ ID NO: 275.

25. An antibody, or an antigen binding fragment thereof, wherein the antibody comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 228 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 229; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 242 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 243; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 258 and a light chain variable region comprising the amino acid sequence of SEQ ID

NO: 259; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 290, and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 291; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 294, and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 291; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 308, and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 309; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 314, and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 309; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 328, and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 329; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 334, and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 329; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 348 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 349; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 357 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 291; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 367 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 368; or a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 274 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 275, wherein the antibody neutralizes hCMV infection.

26. An antibody, or an antigen binding fragment thereof, produced by immortalised B cell clone 8I21, 2C12, 8C15, 4N10, 11B12, 3G16, 4H9, 6B4, 10C6, or 6L3 deposited with the Advanced Biotechnology Center (ABC), Largo Rossana Benzi 10, 16132 Genoa (Italy), under the terms of the Budapest Treaty, on July 9, 2008 (under Accession Numbers PD 08005, PD 08007, PD 08006, PD 08009, PD 08011, PD 08012, PD 08013, PD 08004, PD 08014, and PD 08010, respectively) and by immortalized B cell clone 7H3 deposited on July 16, 2008 under Accession Number PD 08017.

27. The antibody of any one of the previous claims, or an antigen binding fragment thereof, wherein the antibody is a human antibody, a monoclonal antibody, a single chain antibody, Fab, Fab', $F(ab')_2$, Fv or scFv.

28. An antibody, or an antigen binding fragment thereof that binds to the same epitope as the antibody of any of one of the previous claims, wherein the antibody or antigen binding fragment thereof neutralizes hCMV infection.

29. An antibody, or an antigen binding fragment thereof that cross competes with an antibody of any one of the previous claims, wherein the antibody or antigen binding fragment thereof neutralizes hCMV infection.

30. The antibody of any one of the previous claims, or an antigen binding fragment thereof, for treatment of hCMV infection.

31. A nucleic acid molecule comprising a polynucleotide encoding the antibody or antibody fragment of any one of the previous claims.

32. The nucleic acid molecule of claim **31**, wherein the polynucleotide sequence is at least 75% identical to any one of SEQ ID NOs: 194-199, 206, 207, 211, 202, 209, 214; 203, 215, 179-182,155,183, 186, 187, 71-76, 79, 80, 87-92, 95, 96, 103-108, 111, 112, 135-140, 143, 144, 151-156, 159, 160, 165-169, 172, 173, 7-12, 15, 16, 23-28, 31, 32, 39-44, 47, 48, 55-60, 63, 64, 119-124, 127, 128, 222-227, 230, 231, 237-241, 244, 245, 252-257, 260, 261, 284-289, 292, 293, 295, 302-307, 310, 311, 313, 315, 322-327, 330, 331, 333, 335, 342-347, 350, 351, 353-356, 358, 359, 362-364, 365, 366, 369, 370, 268-273, 276, or 277.

33. A cell expressing the antibody of any one of claims **1-30**.

34. An isolated or purified immunogenic polypeptide comprising an epitope that binds to the antibody of any one of claims **1-30**.

35. A pharmaceutical composition comprising the antibody of any one of claims **1-30**, or an antigen binding fragment thereof, the nucleic acid of claim **31** or claim **32**, or the immunogenic polypeptide of claim **34**, and a pharmaceutically acceptable diluent or carrier.

36. A pharmaceutical composition comprising a first antibody or an antigen binding fragment thereof, and a second antibody, or an antigen binding fragment thereof, wherein the first antibody is the antibody of any one of claims **1-30**, and the second antibody neutralizes hCMV infection.

37. Use of the antibody of any one of claims **1-30**, or an antigen binding fragment thereof, the nucleic acid of claim **31** or claim **32**, the immunogenic polypeptide of claim **34**, or the pharmaceutical composition of claim **35** or claim **36** (i) in the manufacture of a medicament for the treatment of hCMV infection, (ii) in a vaccine, or (iii) in diagnosis of hCMV infection.

38. Use of the antibody of any one of claims **1-30**, or an antigen binding fragment thereof, for monitoring the quality of anti-hCMV vaccines by checking that the antigen of said vaccine contains the specific epitope in the correct conformation.

39. An epitope which specifically binds to the antibody of any one of claims **1-30**, or an antigen binding fragment thereof, for use (i) in therapy, (ii) in the manufacture of a medicament for treating hCMV infection, (iii) as a vaccine, or (iv) in screening for ligands able to neutralise hCMV infection.

CLAIMS

1. An isolated antibody, or an antigen binding fragment thereof, that is specific for a hCMV protein gB, and neutralizes infection of endothelial cells, epithelial cells, retinal cells, myeloid cells, dendritic cells, fibroblasts, or mesenchymal stromal cells by a clinical isolate of hCMV, wherein the concentration of antibody required for 90% neutralisation of hCMV is 1.2 μg/ml or less.

2. An isolated antibody, or an antigen binding fragment thereof, that is specific for a hCMV protein gB, comprising a heavy chain variable region having at least 85% sequence identity to SEQ ID NO: 348, 328, 334, 290, 294, 308, 357, 314 or 367 and/or a light chain variable region having at least 85% sequence identity to SEQ ID NO: 349, 329, 291, 309, or 368.

3. The antibody or fragment of claim 2, comprising heavy and light chain variable regions having amino acids sequences at least 85% identical to SEQ ID NOs: 348 and 349, respectively; SEQ ID NOs: 328 and 329, respectively; SEQ ID NOs: 334 and 329, respectively; SEQ ID NOs: 290 and 291, respectively; SEQ ID NOs: 294 and 291, respectively; SEQ ID NOs: 357 and 291, respectively; SEQ ID NOs: 308 and 309, respectively; SEQ ID NOs: 314 and 309, respectively; or SEQ ID NOs: 367 and 368, respectively.

4. An isolated antibody, or an antigen binding fragment thereof, that is specific for a hCMV protein gB, wherein the antibody or fragment comprises heavy and light chain variable regions as set forth in SEQ ID NOs: 328 and 329, respectively; SEQ ID NOs: 334 and 329, respectively; SEQ ID NOs: 290 and 291, respectively; SEQ ID NOs: 294 and 291, respectively; SEQ ID NOs: 357 and 291, respectively; SEQ ID NOs: 308 and 309, respectively; SEQ ID NOs: 314 and 309, respectively; or SEQ ID NOs: 367 and 368, respectively.

5. An isolated antibody, or an antigen binding fragment thereof, that is specific for a hCMV protein gB, wherein the antibody or fragment comprises heavy and light chain variable regions as set forth in SEQ ID NOs: 348 and 349, respectively.

6. The antibody or fragment of claim 1 or 2, comprising

(a) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 336, 337, and 338, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 339, 340, and 341, respectively;

(b) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 316, 317, and 318, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 319, 320, and 321, respectively;

(c) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 316, 317, and 332, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 319, 320, and 321, respectively;

(d) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 278, 279, and 280, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 281, 282, and 283, respectively;

(e) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 352, 279, and 280, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 281, 282, and 283, respectively;

(f) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 296, 297, and 298, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 299, 300, and 301, respectively;

(g) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 296, 312, and 298, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 299, 300, and 301, respectively; or

(h) heavy chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 360, 279, and 280, respectively, and light chain variable region CDR1, CDR2, and CDR3 sequences as set forth in SEQ ID NOs: 281, 282, and 361, respectively.

7. An isolated antibody, or antigen binding fragment thereof, that neutralizes hCMV infection and binds to the same epitope as the antibody or fragment of claim 4, or competes for binding to hCMV with the antibody or fragment of claim 4.

8. The antibody or fragment of any one of the preceding claims, wherein the antibody is a human antibody, a monoclonal antibody, a single chain antibody, Fab, Fab', $F(ab')_2$, Fv or scFv.

9. The antibody or fragment of any one of the preceding claims, for treatment of hCMV infection.

10. An isolated nucleic acid molecule comprising a nucleotide encoding the antibody or fragment of any one of claims 2-8.

11. The nucleic acid molecule of claim 10, wherein the nucleotide sequence is at least 75% identical to any one of SEQ ID NOs: 342-347, 350, 351, 322-327, 330, 331, 333, 335, 284-289, 292, 293, 295, 353-356, 358, 359, 287, 288, 302-307, 310, 311, 313, 315, 362-364, 287, 365, 366, 369 or 370.

12. A cell expressing the antibody or fragment of any one of claims 1-8.

13. A composition comprising the antibody or fragment of any one of claims 1-8, or the nucleic acid of claim 10 or 11, and a pharmaceutically acceptable diluent or carrier and, optionally, a second antibody, or an antigen binding fragment thereof, which neutralizes hCMV infection.

14. The composition of claim 13 wherein the second antibody or fragment is specific for UL128, a combination of UL130 and UL131A, a combination of UL128, UL130 and UL131A, a combination of gH, gL, UL128 and UL130, a second gB epitope, gH, gL, gM, gN, gO or a combination of gM and gN.

15. The composition of claim 13, wherein the second antibody is specific for a combination of the hCMV proteins UL130 and UL131A, selected from

(i) an antibody comprising heavy and light chain sequences of SEQ ID NOs: 61 and 62 respectively;

(ii) an antibody comprising heavy chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs 49, 50 and 51 respectively and light chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs 52, 53 and 54 respectively;

(iii) an antibody comprising heavy and light chain sequences of SEQ ID NOs: 13 and 14 respectively;

(iv) an antibody comprising heavy chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 1, 2 and 3 respectively and light chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 4, 5 and 6 respectively;

(v) an antibody comprising heavy and light chain sequences of SEQ ID NOs: 29 and 30 respectively;

(vi) an antibody comprising heavy chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 17, 18 and 19 respectively and light chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 20, 21 and 22 respectively;

(vii) an antibody comprising heavy and light chain sequences of SEQ ID NOs: 45 and 46 respectively;

(viii) an antibody comprising heavy chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 33, 34 and 35 respectively and light chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 36, 37 and 38 respectively;

(ix) an antibody comprising heavy and light chain sequences of SEQ ID NOs: 125 and 126 respectively;

(x) an antibody comprising heavy chain variable CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 113, 114 and 115 respectively and light chain variable region CDR1, CDR2 and CDR3 sequences as set forth in SEQ ID NOs: 116, 117 and 118 respectively; or

(xi) an antibody selected from 1F11, 2F4 and 5A2.

16. Use of the antibody or fragment of any one of claims 1-8, or the nucleic acid of claim 10 or 11, or the composition of any one of claims 13-15 in the manufacture of a medicament for the treatment of hCMV infection.

17. A method for producing the antibody or fragment of any one of claims 1-8, comprising (i) culturing the cell of claim 12 and (ii) isolating the antibody or fragment.