**CLAIMS**

1. A method for purifying anti-kappa myeloma antigen (KMA) antibodies that bind free kappa light chain not associated with heavy chain from a Chinese Hamster Ovary (CHO) cell culture comprising the anti-KMA antibodies, the method comprising:

binding the anti-KMA antibodies from the CHO cell culture to a Protein A resin of neutral pH;

washing the Protein A resin with a basic wash buffer having a pH of at least 3 to 5 above neutral pH to wash off free kappa light chain not associated with heavy chain; and

eluting the anti-KMA antibodies bound to the Protein A resin with an elution buffer,

in which the anti-KMA antibodies comprises a heavy chain variable region and a light chain variable region, the heavy chain variable region comprising: a complementarity determining region (CDR)1 of SEQ ID NO: 4, a CDR2 of SEQ ID NO: 5, and a CDR3 of SEQ ID NO: 6; and the light chain variable region comprising: a CDR1 of SEQ ID NO: 7, a CDR2 of SEQ ID NO: 8, and a CDR3 of SEQ ID NO: 9.

2. A composition comprising anti-kappa myeloma antigen (KMA) antibodies, in which less than 10% of the anti-KMA antibodies in the composition are anti-KMA antibodies in complex with free kappa light chain not associated with heavy chain, and in which the anti-KMA antibodies comprise a heavy chain variable region and a light chain variable region, the heavy chain variable region comprising: a complementarity determining region (CDR)1 of SEQ ID NO: 4, a CDR2 of SEQ ID NO: 5 and a CDR3 of SEQ ID NO: 6; and the light chain variable region comprising: a CDR1 of SEQ ID NO: 7, a CDR2 of SEQ ID NO: 8 and a CDR3 of SEQ ID NO: 9.

3. A composition according to Claim 2, in which less than 6% of the anti-KMA antibodies in the composition are anti-KMA antibodies in complex with free kappa light chain not associated with heavy chain.

4. A method according to Claim 1 or a composition according to Claim 2 or 3, in which the heavy chain variable region comprises the amino acid sequence set forth in SEQ ID NO:1 and the light chain variable region comprises the amino acid sequence set forth in SEQ ID NO:3.

5. A composition according to Claim 2, 3 or 4, in which the anti-KMA antibodies are produced by Chinese Hamster Ovary (CHO) cells.

6. A composition according to any of Claims 2 to 5, in which the anti-KMA antibodies are purified from free kappa light chain not associated with heavy chain by a method comprising:

loading a composition comprising the anti-KMA antibodies and free kappa light chain not associated with heavy chain onto an equilibrated affinity chromatography column of neutral pH to bind the anti-KMA antibodies in the composition to the affinity chromatography column;

washing the affinity chromatography column with a basic wash buffer having a pH of at least 3 to 5 above neutral pH to wash off free kappa light chain not associated with heavy chain from the composition; and

eluting the anti-KMA antibodies bound to the affinity chromatography column with an elution buffer.

7. A composition according to Claim 6, in which the composition comprising the anti-KMA antibodies and free kappa light chain not associated with heavy chain is cell culture fluid obtained from the cell culture of CHO cells which express the anti-KMA antibodies.

8. A method according to Claim 1 or 4 or a composition according to Claim 6 or 7, in which the basic wash buffer has one or more of the following:

0.1 M to 0.2 M sodium carbonate; and/or

1 M sodium chloride.

9. A method according to any of Claims 1, 4 and 8, in which washing the Protein A resin to wash off free kappa light chain not associated with heavy chain comprises washing the Protein A resin twice with a basic wash buffer or a composition according to any of Claims 6, 7 or 8, in which washing the affinity chromatography column to wash off free kappa light chain not associated with heavy chain comprises washing the affinity chromatography column twice with a basic wash buffer.

10. A method according to Claim 9 or a composition according to Claim 9, in which in a first wash the basic wash buffer comprises 0.2 M sodium chloride and in a second wash the basic wash buffer comprises 0.1 M sodium chloride.

11. A method according to Claim 10 or a composition according to Claim 10, in which the basic wash buffers have the same pH.

12. A method according to any of Claims 1, 4 and 8 to 11, in which the method of washing the Protein A resin further comprises washing with an acidic wash buffer; or a composition according to any of Claims 6 to 11, in which the method of washing the affinity chromatography column further comprises washing with an acidic wash buffer.

13. A method or composition according to Claim 12, in which the acidic wash buffer:

has a pH of 5.5 to 6.5; and/or

comprises about 35 mM sodium phosphate.

14. A method according to any of Claims 1, 4 and 8 to 13 or a composition according to any of Claims 6 to 13, in which the elution buffer is acidic.

15. A method according to any of Claims 1, 4 and 8 to 14 or a composition according to any of Claims 6 to 14, in which the elution buffer has one or more of the following:

a pH lower than the acidic wash buffer;

a pH of 2.5 to 3.5; and/or

10 mM sodium phosphate.

16. A composition according to any of Claims 6 to 15, in which the affinity chromatography column is a protein A chromatography column.

17. A method according to any of Claims 1, 4 and 8 to 16 or a composition according to any of Claims 6 to 16, in which the method further comprises one or more of the following:

a viral inactivation step;

a viral filtration step; and/or

a step of formulating the eluted anti-KMA antibodies or the composition into a pharmaceutical composition or a diagnostic composition.

18. A method according to any of Claims 1, 4 and 8 to 17 or a composition according to any of Claims 2 to 17, in which the free kappa light chain not associated with heavy chain is a kappa light chain dimer.

19. A method according to any of Claims 1, 4 and 8 to 18 or a composition according to any of Claims 2 to 18, in which the molecular weight of the free kappa light chain not associated with heavy chain is between 22 kDa and 100 kDa.

20. A method n according to any of Claims 1, 4 and 8 to 19, in which the eluted anti-KMA antibodies are subject to cation exchange chromatography to remove any high molecular weight species, and:

at least 90% of the total anti-KMA antibody population is unbound anti-KMA antibodies as determined by SEC-HPLC and/or BiaCore assay; or

between 85% and 95% of the total anti-KMA antibody population is unbound anti-KMA antibodies as determined by SEC-HPLC and/or BiaCore assay.