CLAIMS

1. A pharmaceutical formulation, comprising a polypeptide that comprises CDR1 comprising the sequence of SEQ ID NO: 4 (CDR1 of VH3-M73), CDR2 comprising the sequence of SEQ ID NO: 5 (CDR2 of VH3-M73), CDR3 comprising the sequence of SEQ ID NO: 6 (CDR3 of VH3-M73) ,and CDR1 comprising the sequence of SEQ ID NO: 13 (CDR1 of VL3), CDR2 comprising the sequence of SEQ ID NO: 14 (CDR2 of VL3), CDR3 comprising the sequence of SEQ ID NO: 15 (CDR3 of VL3).

2. A pharmaceutical formulation, comprising at least one antibody selected from:
(a) an antibody which comprises a heavy chain variable region that comprises CDR1 comprising the sequence of SEQ ID NO: 4 (CDR1 of VH3-M73), CDR2 comprising the sequence of SEQ ID NO: 5 (CDR2 of VH3-M73), and CDR3 comprising the sequence of SEQ ID NO: 6 (CDR3 of VH3-M73), and a light chain variable region that comprises CDR1 comprising the sequence of SEQ ID NO: 13 (CDR1 of VL3), CDR2 comprising the sequence of SEQ ID NO: 14 (CDR2 of VL3), and CDR3 comprising the sequence of SEQ ID NO: 15 (CDR3 of VL3);
(b) an antibody that comprises a heavy chain variable region comprising the sequence of SEQ ID NO: 20 (variable region of VH3-M73) and a light chain variable region comprising the sequence of SEQ ID NO: 23 (variable region of VL3), and
(c) an antibody that comprises a heavy chain comprising the sequence of SEQ ID NO: 26 (VH3-M73) and a light chain comprising the sequence of SEQ ID NO: 29 (VL3).

3. A stable pharmaceutical formulation according to claim 1 or 2, comprising a histidine and/or citrate buffer.

4. A stable pharmaceutical formulation according to any one of claims 1-3, comprising at least one cationic amino acid.

5. A stable pharmaceutical formulation according to any one of claims 1-4, comprising 1 - 500 mM histidine and/or citrate buffer, 1-1500 mM of at least one cationic amino acid, 1-200 mg/mL antibody, and 1-400 mM of a carbohydrate.

6. The formulation according to claim 4 or 5, whereby the cationic amino acid is arginine.

7. The formulation according to claim 5 or 6, whereby the carbohydrate is sucrose or trehalose.

8. The formulation according to any one of claims 1-7 further comprising a surfactant.

9. The formulation according to any one of claims 1-8 containing the polypeptide and/or antibody in an amount of at least 10 mg/ml.

10. The formulation according to any one of claims 1-9 containing the polypeptide and/or antibody in an amount of at least 50 mg/ml.

11. The formulation according to any one of claims 1-10 containing the polypeptide and/or antibody in an amount of at least 80 mg/ml.

12. The formulation according to any one of claims 1-11 containing the polypeptide and/or antibody in an amount of less than or equal to 240 mg/ml.

13. The formulation according to any one of claims 1-12 having a pH in the range from 4.5 to 7.0.

14. The formulation according to claim 13 having a pH range from 5.5 to 6.6.

15. The formulation according to any one of claims 1-14, whereby the formulation is liquid.

16. The formulation according to claim 15 which has not been subjected to lyophilization during preparation of the formulation.

17. The formulation according to any one of claims 1-16, wherein the dimerization of the polypeptide and/or antibody molecules is reduced.

18. The formulation according to any one of claims 1-17, wherein the dimerization of the polypeptide and/or antibody molecules is inhibited.

19. The formulation according to any one of claims 1-18, which is for subcutaneous administration.

20. A method for stabilizing a solution containing the antibody, comprising adding at least one cationic amino acid, wherein the antibody is at least one antibody selected from:
(a) an antibody which comprises a heavy chain variable region that comprises CDR1 comprising the sequence of SEQ ID NO: 4 (CDR1 of VH3-M73), CDR2 comprising the sequence of SEQ ID NO: 5 (CDR2 of VH3-M73), and CDR3 comprising the sequence of SEQ ID NO: 6 (CDR3 of VH3-M73), and a light chain variable region that comprises CDR1 comprising the sequence of SEQ ID NO: 13 (CDR1 of VL3), CDR2 comprising the sequence of SEQ ID NO: 14 (CDR2 of VL3), and CDR3 comprising the sequence of SEQ ID NO: 15 (CDR3 of VL3);
(b) an antibody that comprises a heavy chain variable region comprising the sequence of SEQ ID NO: 20 (variable region of VH3-M73) and a light chain variable region comprising the sequence of SEQ ID NO: 23 (variable region of VL3), and
(c) an antibody that comprises a heavy chain comprising the sequence of SEQ ID NO: 26 (VH3-M73) and a light chain comprising the sequence of SEQ ID NO: 29 (VL3).

21. A method for stabilizing an antibody during freeze/thaw cycles of a solution containing the antibody, comprising adding at least one cationic amino acid, wherein the antibody is at least one antibody selected from:
(a) an antibody which comprises a heavy chain variable region that comprises CDR1 comprising the sequence of SEQ ID NO: 4 (CDR1 of VH3-M73), CDR2 comprising the sequence of SEQ ID NO: 5 (CDR2 of VH3-M73), and CDR3 comprising the sequence of SEQ ID NO: 6 (CDR3 of VH3-M73), and a light chain variable region that comprises CDR1 comprising the sequence of SEQ ID NO: 13 (CDR1 of VL3), CDR2 comprising the sequence of SEQ ID NO: 14 (CDR2 of VL3), and CDR3 comprising the sequence of SEQ ID NO: 15 (CDR3 of VL3);
(b) an antibody that comprises a heavy chain variable region comprising the sequence of SEQ ID NO: 20 (variable region of VH3-M73) and a light chain variable region comprising the sequence of SEQ ID NO: 23 (variable region of VL3), and
(c) an antibody that comprises a heavy chain comprising the sequence of SEQ ID NO: 26 (VH3-M73) and a light chain comprising the sequence of SEQ ID NO: 29 (VL3).