

CLAIMS

1. A pharmaceutical composition comprising a recombinant protein, wherein the pharmaceutical composition is a liquid formulation comprising one or more amino acids and a surfactant, wherein said one or more amino acids comprise histidine and/or proline
 5 and wherein the recombinant protein is an antibody or an antigen-binding fragment thereof which is:

1) an antibody or antigen-binding fragment thereof which:

a. comprises CDR-H1 having the sequence as defined in SEQ ID NO:1; CDR-H2 having the sequence as defined in SEQ ID NO:2; CDR-H3
 10 having the sequence as defined in SEQ ID NO:3; CDR-L1 having the sequence as defined in SEQ ID NO:4; CDR-L2 having the sequence as defined in SEQ ID NO:5 and CDR-L3 having the sequence as defined in SEQ ID NO:6; or

b. comprises a light variable region having the sequence as defined in SEQ
 15 ID NO: 7 and a heavy variable region having the sequence as defined in SEQ ID NO: 8; or

c. comprises a light variable region having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ
 20 ID NO: 7 and a heavy variable region having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 8;

d. comprises a light variable region having the sequence as defined in SEQ
 ID NO: 7 and a heavy chain having the sequence as defined in SEQ ID
 NO: 11; or

e. comprises a light variable region having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ
 25 ID NO: 7 and a heavy chain having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 11; or

2) an antibody which comprises a light chain having the sequence as defined in
 30 SEQ ID NO: 9 and a heavy chain having the sequence as defined in SEQ ID NO: 10; or

3) an antibody which comprises a light chain having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID
 35 NO: 9 and a heavy chain having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 10.

2. A pharmaceutical composition comprising an antibody or an antigen-binding fragment thereof, wherein the pharmaceutical composition is a liquid formulation comprising histidine and/or proline and a surfactant, and wherein the antibody or an antigen-binding fragment thereof is:

1) an antibody or antigen-binding fragment thereof which:

a. comprises CDR-H1 having the sequence as defined in SEQ ID NO:1; CDR-H2 having the sequence as defined in SEQ ID NO:2; CDR-H3 having the sequence as defined in SEQ ID NO:3; CDR-L1 having the sequence as defined in SEQ ID NO:4; CDR-L2 having the sequence as defined in SEQ ID NO:5 and CDR-L3 having the sequence as defined in SEQ ID NO:6; or

b. comprises a light variable region having the sequence as defined in SEQ ID NO: 7 and a heavy variable region having the sequence as defined in SEQ ID NO: 8; or

c. comprises a light variable region having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 7 and a heavy variable region having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 8;

d. comprises a light variable region having the sequence as defined in SEQ ID NO: 7 and a heavy chain having the sequence as defined in SEQ ID NO: 11; or

e. comprises a light variable region having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 7 and a heavy chain having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 11; or

2) an antibody which comprises a light chain having the sequence as defined in SEQ ID NO: 9 and a heavy chain having the sequence as defined in SEQ ID NO: 10; or

3) an antibody which comprises a light chain having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 9 and a heavy chain having at least 80% identity or similarity, preferably 90% identity or similarity to the sequence as defined in SEQ ID NO: 10.

3. The pharmaceutical composition according to any one of the preceding claims, wherein the formulation comprises histidine in a concentration of 5 mM to 100 mM, e.g. a concentration of 10 mM to 50 mM, and/or proline in a concentration of 100 mM to 500 mM, at a pH between 5 and 7.4, such as between 5 and 6.5, e.g. between 5 and 6.

4. The pharmaceutical composition according to any one of the preceding claims, wherein the formulation comprises histidine in a concentration of 30 mM and proline in a concentration of 250 mM, at a pH between 5.2 and 6.0
- 5 5. The pharmaceutical composition according to any one of the preceding claims, wherein the surfactant is polysorbate 80, preferably in a concentration of 0.001% to 0.1% (w/v), e.g. 0.005% to 0.1%, such as 0.01% to 0.1%, e.g. 0.01% to 0.05%, such as 0.03%.
- 10 6. The pharmaceutical composition according to any one of the preceding claims, wherein the antibody or antigen-binding fragment thereof is formulated at a concentration of 10 mg/ml to 250 mg/ml, e.g. 20 mg/ml to 250 mg/ml, such as 50 mg/ml to 250 mg/ml, e.g. 120 mg/ml to 160 mg/ml, such as 140 mg/ml.