CLAIMS

1. An antibody comprising a heavy chain comprising the amino acid sequence of SEQ ID NO: 1 and a light chain comprising the amino acid sequence of SEQ ID NO: 2.

2. The antibody of claim 1, wherein the antibody is of the IgG isotype.

3. The antibody of claim 1, wherein the antibody is of the IgG4 isotype.

4. The antibody of any one of claims 1-3, wherein the antibody has a K_D value for binding the protofibril form of α-synuclein at least 110,000 times smaller than the K_D value for binding the monomeric form of α-synuclein.

5. The antibody of any one of claims 1-3, wherein the antibody has a K_D value for binding the protofibril form of α-synuclein of at most 18 pM and a K_D value for binding the monomeric form of α-synuclein of at least 2200 nM.

6. The antibody of either claim 4 or 5, wherein the K_D of said antibody for binding to the protofibril form of α-synuclein and the K_D of said antibody for binding to the monomeric form of α-synuclein are measured by SPR.

7. An antibody comprising a heavy chain comprising the amino acid sequence of SEQ ID NO:3 and a light chain comprising the amino acid sequence of SEQ ID NO:4.

8. The antibody of claim 7, wherein the antibody comprises two heavy chains and two light chains.

9. One or more nucleic acids encoding the antibody of any one of claims 1 to 8.

10. The one or more nucleic acids of claim 9, wherein

(a) the one or more nucleic acids comprise the sequences of SEQ ID NOs: 11 and 12,

(b) the one or more nucleic acids comprise the sequences of SEQ ID NOs: 13 and 14,

(c) the one or more nucleic acids comprise the sequences of SEQ ID NOs: 17 and 18, or

(d) the one or more nucleic acids comprise the sequences of SEQ ID NOs: 19 and 20.

11. One or more vectors comprising the nucleic acid(s) of claim 9 or 10.

12. A host cell comprising the nucleic acid(s) of claim 9 or 10.

13. A host cell comprising the one or more vector(s) of claim 11.

14. A host cell expressing the antibody of any one of claims 1-8.

15. A composition comprising the antibody of any one of claims 1-8 and a pharmaceutically acceptable carrier.