Claims

1. An antibody or antigen binding fragment thereof having affinity against Aβ protofibrils, comprising:

(a) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 12; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 16;

(b) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 9; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 15;

(c) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 10; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 15;

(d) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 11; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 15;

(e) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 12; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 15;

(f) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 9; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 16;

(g) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 10; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 16; or

(h) a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 11; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 16.

2. The antibody or antigen binding fragment thereof according to claim 1, comprising a variable light chain comprising an amino acid sequence as set out in SEQ ID NO: 12; and a variable heavy chain comprising an amino acid sequence as set out in SEQ ID NO: 16.

3. The antibody or antigen binding fragment thereof according to claim 1 or 2, wherein the antibody or the antigen binding fragment thereof comprises an IgG heavy chain constant region.

4. The antibody or antigen binding fragment thereof according to any one of claims 1 to 3 for use in the treatment of Alzheimer's disease or other disorders associated with Aβ protein aggregation, such as traumatic brain injury (TBI), Lewy body dementia (LBD), Downs

syndrome (DS), Amyotrophic lateral sclerosis (ALS), Frontotemporal dementia, tauopathies, systemic amyloidoses, atherosclerosis and Parkinson's disease dementia (PDD).

5. A pharmaceutical composition comprising the antibody or antigen binding fragment according to any one of claims 1 to 3, together with a pharmaceutically acceptable excipient and/or diluent.

6. The antibody or antigen binding fragment according to claim 4 for use in the treatment of Alzheimer's disease, Down's syndrome, or another disorder associated with Aβ protein aggregation in a subject having said disease or disorder.

7. The antibody or antigen binding fragment according to any one of claims 1 to 3 for use in a method for measuring the amount of Aβ protofibrils and/or aggregated Aβ protein in a person, comprising contacting the person's tissue or body fluid, in vitro, with the antibody or antigen binding fragment according to claim 1 and measuring the amount of antibody or antigen binding fragment bound to said Aβ protofibrils and/or aggregated Aβ protein.

8. The antibody or antigen binding fragment according to any one of claims 1 to 3 for use in a method for diagnosis of Alzheimer's disease in a person having or at risk of developing the disease or in a method for diagnosis of Down's syndrome in a person, comprising contacting the person's tissue or body fluid, in vivo or in vitro, with the antibody or antigen binding fragment according to claim 1 and measuring the amount of antibody or antigen binding fragment bound to said aggregated Aβ protein.

9. A method for measuring the amount of Aβ protofibrils and/or aggregated Aβ protein in a person, comprising contacting the person's tissue or body fluid, in vitro, with the antibody or antigen binding fragment according to any one of claims 1 to 3 and measuring the amount of antibody or antigen binding fragment bound to said Aβ protofibrils and/or aggregated Aβ protein.

10. Use of the antibody or antigen binding fragment according to any one of claims 1 to 3 in the manufacture of a medicament for the treatment of Alzheimer's disease or other disorders associated with Aβ protein aggregation, such as traumatic brain injury (TBI), Lewy body dementia (LBD), Downs syndrome (DS), Amyotrophic lateral sclerosis (ALS), Frontotemporal

dementia, tauopathies, systemic amyloidoses, atherosclerosis and Parkinson's disease dementia (PDD).

11. The use according to claim 10, wherein the medicament is for the treatment of Alzheimer's disease of Down's syndrome.