Claims

1. A monoclonal antibody or antigen-binding fragment thereof, wherein the antibody or antigen-binding fragment a) binds tau deposits in human Alzheimer's disease (AD) brain tissue b) does not bind tau in normal human brain tissue and c) does not bind tau deposits in Progressive Supranuclear Palsy (PSP) brain tissue, wherein the antibody is selected from the group consisting of a) an antibody comprising a heavy chain CDR1 region of SEQ ID NO:163, a heavy chain CDR2 region of SEQ ID NO:164, and a heavy chain CDR3 region of SEQ ID NO:165, a light chain CDR1 region of SEQ ID NO:166, a light chain CDR2 region of SEQ ID NO:167 and a light chain CDR3 region of SEQ ID NO:168. b) an antibody comprising a heavy chain CDR1 region of SEQ ID NO:169, a heavy chain CDR2 region of SEQ ID NO:170, and a heavy chain CDR3 region of SEQ ID NO:171, a light chain CDR1 region of SEQ ID NO:172, a light chain CDR2 region of SEQ ID NO:173 and a light chain CDR3 region of SEQ ID NO:174,wherein the antibody or antigen-binding fragment thereof is phospho-specific.

2. An isolated nucleic acid encoding an antibody or antigen-binding fragment according to claim 1.

3. A vector comprising a nucleic acid according to claim 2.

4. A host cell comprising the vector according to claim 3.

5. A method of producing an antibody or antigen-binding fragment according to claim 1, comprising culturing the host cell of claim 4 and recovering the antibody or fragment thereof produced by the host cell.

6. A pharmaceutical composition comprising an antibody or antigen-binding fragment according to claim 1, the pharmaceutical composition further comprising at least one pharmaceutically acceptable excipient.

7. An antibody or antigen-binding fragment according to claim 1, or a pharmaceutical composition according to claim 6 for use as a medicament.

8. A method for detecting or diagnosing Alzheimer's disease, or memory and/or cognitive disorders associated with tau, comprising a) assaying the level of tau antigen in a sample using an antibody or antigen-binding fragment according to claim 1, b) detecting or diagnosing Alzheimer's disease, or memory and/or cognitive disorders, using a human biological sample.