Monoclonal antibodies against SFRP1 for the diagnosis and treatment of Alzheimer Disease

CSIC and ISCIII have developed methods for the diagnosis and treatment of Alzheimer´s disease (AD) based on therapeutic monoclonal antibodies capable of binding and neutralizing the activity of SFRP1. The invention comprises a set of antibodies, kits and pharmaceutical compositions aimed at the treatment and/or diagnosis of AD in patients.

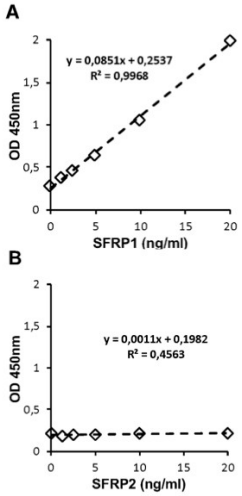
Pharma/biotech company is sought for license agreements.

An offer for Patent Licensing

Antibodies based on the target SFRP1

Abnormally high SFRP1 levels in the brain of Alzheimer Disease patients have three main direct consequences: increase the production of toxic APP products, promote synaptic dysfunction and sustain neuroinflammation. SFRP1 has been shown to be a target involved in the generation of Aβ aggregates that accumulate in amyloid plaques (APs) in the brain of AD patients.

The offered monoclonal antibodies against SFRP1 have been used to generate an ELISA to measure SFRP1 levels in tissue extract. We have also identified a specific mAB with SFRP1 neutralizing activity that is particularly effective in preventing AD pathology in preclinical models.



ELISA standard curve showing the specificity of the assay that recognizes recombinant hSFRP1 but not the highly related hSFRP2

Main advantages

- A highly specific ELISA assay to measure SFRP1 levels in human body fuids and tissue extracts is readily available
- The ELISA is very sensitive and can be applied to determine levels of SFRP1 in CSF of Alzheimer disases patients
- Low levels of SFRP1 are known to be related with some cancer diseases. This ELISA is capable to be used for a better, accurate prognosis/diagnosis in cancer.
- One of the mAB set has been proved to be therapeutically effective against Alzheimer's Disease models, with the subsequent ability to act as a valuable therapuetic agent.

Patent Status

Priority patent application filed suitable for international extension

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