Antibodies Against Prion Proteins for Treatment of Alzheimer’s Disease

OCR Number: OCR 4677

Description:

• **Background:** Cellular prion protein PrPC acts as a high affinity receptor for A?-oligomers and is required for A?-oligomer-induced synaptic dysfunction in vitro and in vivo. Signal transduction downstream of A?o/PrPC involves mGluR5, Fyn and Pyk2.

• In an AD Tg mouse model an infusion of the anti-PrPC mAb 6D11 produces a significant behavioral rescue in the setting of advanced disease, even with a relatively short treatment regiment (Fig.1).

• The proposed mechanism of action is blocking of the binding between A? oligomers and PrPC, resulting in an amelioration of synaptic loss (Fig.2).

• **Indications:** Alzheimer’s Disease; other neurodegenerative disorders.

![Fig. 1. Radial arm maze cognitive testing. The number of errors is plotted versus the day of testing.](image1)

![Fig. 2. Synaptophysin immunoreactive presynaptic terminals in the molecular layer of the dentate gyrus of the hippocampus.](image2)

**Published/Issued Patents:** [U.S. Patent No. 9,217,036](https://patent.yale.edu)

**Publications:**


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