Oligomerization of Aβ42 is considered as an early event in AD. Irie et al. have proposed the toxic conformer with a turn at positions 22 and 23 in Aβ42 aggregates. This toxic Aβ conformer could form stable and neurotoxic oligomers. Antibody 24B3, highly specific for the toxic Aβ42 conformer, has been developed to be applied for ELISA assay kit. This kit could detect selectively putative Aβ oligomers in CSF. The ratio of toxic Aβ oligomers to total Aβ42 in CSF could distinguish between AD/MCI patients and age-matched individuals.

<table>
<thead>
<tr>
<th>Code</th>
<th>Species</th>
<th>Name</th>
<th>Package Size</th>
<th>Measurement Range</th>
<th>Measuring Samples</th>
</tr>
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<tbody>
<tr>
<td>27709</td>
<td>Human</td>
<td>Human Amyloid β Toxic Oligomer Assay Kit - IBL</td>
<td>96 well</td>
<td>3.13 ~ 200 pg/mL</td>
<td>CSF</td>
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</table>

References
Alzheimer’s disease (AD) is characterized by the presence of extracellular plaques and intracellular neurofibrillary tangles (NFTs) in the brain. Aggregation of the 42-mer amyloid β-protein (Aβ42) plays a critical role in the pathogenesis of AD. The monoclonal antibody named 11A1 was developed for toxic Aβ42, using E22P-Aβ10-35, a minimum moiety for neurotoxicity containing the turn at positions 22 and 23, for the generation. Immunohistochemical studies showed that not only extracellular but intracellular amyloid was stained in human AD brains. 11A1 could detect toxic oligomers of Aβ with the turn at positions 22 and 23.

This antibody can detect not only senile plaque (blue arrow in figure) but also intracellular Aβ (red arrow in figure) (Ref.4)

This antibody can detect Aβ oligomer in AD brain extract.

Distributed By:
Immuno-Biological Laboratories, Inc. (IBL-America)
8201 Central Ave NE, Suite P Minneapolis, MN 55432 USA
Fax: 763-780-2988 / Email: info@ibl-america.com