

Product no **AS10 932**

## Amyloid beta oligomer-specific monoclonal antibody (OMAB)

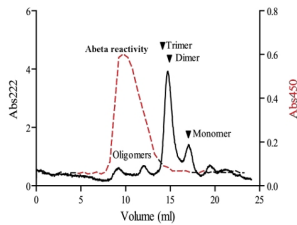
### Product information

<b>Immunogen</b>	partly aggregated, recombinant peptide corresponding to the human Abeta (1-40/42). Amino acid sequence: D-A-E-F-R-H-D-S-G-Y-E-V-H-H-Q-K-L-V-F-F-A-E-D-V-G-S-N-K-G-A-I-I-G-L-M-V-G-G-V-V. The epitope is 3-8. Molecular weight of immunogen is 4.5 kDa.
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Subclass/isotype</b>	IgM
<b>Purity</b>	Affinity purified
<b>Format</b>	Lyophilized
<b>Quantity</b>	50 µg
<b>Reconstitution</b>	For reconstitution add 100 µl of sterile water.
<b>Storage</b>	Store lyophilized/reconstituted at 4 °C. Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.
<b>Additional information</b>	OMAB antibody has been purified by ion-exchange chromatography and is supplied in PBS without any additives as carrier proteins or sodium azide.  Binding of OMAB antibody and Abeta oligomers at RT takes about 15 min.  Fibrils are inaccessible for OMAB antibodies therefore if a discrimination between fibrils and oligomers is to be achieved, dot blot can be used. Start with antigen concentration of 500 ng/dot followed by 2X dilution steps. Blocking: non-fat milk and washes with 0.3 % Tween 20 in TBS pH 7.4.

### Application information

<b>Recommended dilution</b>	Coating antibody at 2 µg/ml (ELISA), 1 : 500 (IHC)
<b>Expected   apparent MW</b>	4.5 kDa
<b>Confirmed reactivity</b>	Human Abeta oligomers only
<b>Predicted reactivity</b>	Rat
<b>Not reactive in</b>	No confirmed exceptions from predicted reactivity are currently known.
<b>Additional information</b>	OMAB antibody is a versatile tool within research of Alzheimer's disease. A sandwich ELISA illustrates its potential regarding its high selectivity towards A $\beta$ oligomers. For high resolution images, please visit the specific product page at <a href="http://www.agrisera.com">www.agrisera.com</a>
<b>Selected references</b>	<a href="#">Henning-Knechtel et al. (2020)</a> . Designed Cell-Penetrating Peptide Inhibitors of Amyloid-beta Aggregation and Cytotoxicity. <i>Cell Reports Physical Science</i> , Volume 1, Issue 2, 26 <a href="#">Oh et al. (2020)</a> . Associative Interactions among Zinc, Apolipoprotein E, and Amyloid- $\beta$ in the Amyloid Pathology. <i>Int J Mol Sci.</i> 2020 Jan 25;21(3). pii: E802. doi: 10.3390/ijms21030802. <a href="#">Zhang et al. (2019)</a> . Brains of rhesus monkeys display A $\beta$ deposits and glial pathology while lacking A $\beta$ dimers and other Alzheimer's pathologies. <i>Aging Cell.</i> 2019 Jun 4:e12978. doi: 10.1111/acer.12978. <a href="#">Kumar et al. (2018)</a> . Peptidomimetic-Based Multidomain Targeting Offers Critical Evaluation of A $\beta$ Structure and Toxic Function. <i>J Am Chem Soc.</i> 2018 May 30;140(21):6562-6574. doi: 10.1021/jacs.7b13401. <a href="#">Kumar et al. (2017)</a> . Foldamer-Mediated Structural Rearrangement Attenuates A $\beta$ Oligomerization and Cytotoxicity. <i>J Am Chem Soc.</i> 2017 Nov 29;139(47):17098-17108. doi: 10.1021/jacs.7b08259. <a href="#">Zhao et al. (2016)</a> . Anti-amyloidogenic Activity of A $\beta$ 42-Binding Peptoid in Modulating Amyloid Oligomerization. <i>Small.</i> 2016 Oct 7. doi: 10.1002/sml.201602857. <a href="#">Richman et al. (2013)</a> . In Vitro and Mechanistic Studies of an Anti-Amyloidogenic Self-Assembled Cyclic D,L- $\beta$ -Peptide Architecture. <i>J. Americal Chemical Societ.</i> Jan 19. <a href="#">Lindhagen-Persson et al. (2010)</a> . Amyloid- $\beta$ Oligomer Specificity Mediated by the IgM Isotype – Implications for a Specific Protective Mechanism Exerted by Endogenous Auto-Antibodies. <i>PLoS ONE.</i>

## Application example



Abeta oligomer-specific antibody was adsorbed to Nunc-Immuno MaxiSorp plates (Nunc, Roskilde, Denmark) at 2 ug/ml in PBS. 1 ml of a 10 uM A (1-42) sample containing a small fraction of A -oligomers was separated using a superdex G75 (10/30) column. A -fractions collected from the SEC were allowed to bind to OMAB plates for 20 minutes at 0°C. All fractions were analyzed and bound A was detected using a polyclonal rabbit anti-A antibody ([AS08 328](#)), Agrisera AB, Vännäs, Sweden) at a 1:1000 dilution followed by an anti-rabbit HRP-conjugated secondary antibody at a 1:5000 dilution (GE healthcare). ECBlue (Medicago, Uppsala, Sweden) was used as a substrate for HRP and the signal was detected by measuring the absorbance at 450 nm. Blocking solution and antibody-dilutions were made with 5% Non-fat dry milk in PBST and all washes were performed with PBS containing 0.1% Tween-20 (PBST).

10 µm of coronal sections from fresh-frozen transgenic mouse brain mutant (**A**) and wild type (**B**). Post-fixation in 4% formaldehyde solution, 5 min. OMAB antibody diluted 1:500, incubation at 4°C ON. Mouse on mouse HRP-Polymer kit according to company instructions. Biocare Medical: BC-MM510 (Histolab) DAB substrate kit for peroxidase. Vector Laboratories: SK-4100 (ImmunKemi) Counterstained with Mayers HTX.