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Product no AS10 932

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

Product information

Immunogen

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. The molecular weight of immunogen is 4.5 kDa.

Host Mouse

Clonality | Monoclonal

Subclass/isotype IgM

Purity Affinity purified in PBS pH 7.4.

Format Lyophilized

Quantity 50 μg

Reconstitution For reconstitution add 100 μl of sterile water

Storage

Store lyophilized/reconstituted at 4 °C. Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.

Additional information

OMAB antibody has been purified by 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

Recommended dilution Coating antibody at 2 μg/ml (ELISA), 1: 1000 (IF), 1: 500 (IHC)

Expected | apparent MW

Confirmed reactivity Human Abeta oligomers only

Predicted reactivity Rat

4.5 kDa

Not reactive in No confirmed exceptions from predicted reactivity are currently known

Additional information

OMAB antibody is a versatile tool within research of Alzheimer's disease, A sandwhich ELISA illustrates its potential regarding its high selectivity towards A? oligomers

Selected references

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Zhang et al. (2019). Brains of rhesus monkeys display A? deposits and glial pathology while lacking A? dimers and other Alzheimer's pathologies. Aging Cell. 2019 Jun 4:e12978. doi: 10.1111/acel.12978.

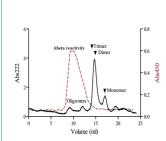
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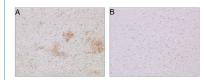
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Abeta oligomer-specific antibody was adsorbed to Nunc-Immuno MaxiSorp plates (Nunc, Roskilde, Denmark) at 2 ug/ml in PBS. 1 ml of a 10 uM A (1-42) sample containing a small fraction of A -oligomers was separated using a superdex G75 (10/30) column. 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-Aβ antibody (ASOB 32B), Agrisera AB, Vannās, 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.