abcam

Product datasheet

Anti-Amyloid Fibril antibody [mOC87] - Conformation-Specific ab201062

Recombinant RabMAb

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Overview

Product name Anti-Amyloid Fibril antibody [mOC87] - Conformation-Specific

DescriptionRabbit monoclonal [mOC87] to Amyloid Fibril - Conformation-Specific

Host species Rabbit

Tested applications Suitable for: Dot blot, IHC-P, IHC-FrFI

Species reactivity Reacts with: Mouse, Human

Immunogen Synthetic peptide corresponding to Human Amyloid Fibril. Amyloid beta 1-42 fibrils were used as

the immunogen.

Database link: P05067

Positive control beta Amyloid (Aß) 1-40; beta Amyloid (Aß) 1-42. IHC-P: FFPE human Alzheimer hippocampus

tissue sections.

General notesThis antibody was developed as part of a collaboration between Abcam and Professor Charles

Glabe, UC Irvine.

ab201062 recognizes a generic epitope of amyloid fibrils and oligomers that is independent of linear sequence (**Hatami et al. 2014**). Its reactivity with Aß monomer and oligomers is decreased or eliminated upon thermal denaturation at 100°C of Aß in SDS sample buffer on western blots

(Hatami et al. 2014).

For further information on the immunogen, please refer to <u>Hatami et al. 2014</u> and <u>Kayed et al.</u>

<u>2007</u>.

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information **see here**.

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb**[®] **patents**.

Properties

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Form Liquid

Storage instructions Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long

term. Avoid freeze / thaw cycle.

Storage buffer pH: 7.2

Preservative: 0.01% Sodium azide

Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA

Purity Protein A purified

Clonality Monoclonal
Clone number mOC87

Isotype IgG

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab201062 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Dot blot		1/8000.
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IHC-FrFI		Use at an assay dependent concentration.

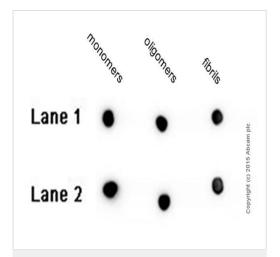
Target			
Cellular localization	Membrane.		
Images			



Immunohistochemistry - Free Floating - Anti-Amyloid Fibril antibody [mOC87] - Conformation-Specific (ab201062)

Image courtesy of Professor Charles Glabe, UC Irvine

Immunohistochemical staining of human brain tissue from a patient with a diagnosis of Alzheimers disease, male, 81 years, 5 hour post mortem index, tangle stage 5, plaque stage B, mini mental status exam score 12. Sections were cut using a vibratome. No antigen retrieval was performed. Free floating sections were stained using ab201062 at a dilution of 50 ng/mL. The secondary antibody used was a biotinylated goat anti-rabbit at a dilution of 1/225, which was blocked with normal goat serum. The sample was visualized using ABC solution (1 hour incubation) followed by 1-4 minutes of DAB. The sample was mounted and allowed to dry overnight, followed by dehydration in increasingly concentrated ethanol solutions.



Dot Blot - Anti-Amyloid Fibril antibody [mOC87] - Conformation-Specific (ab201062)

Dot blot analysis of beta Amyloid 1-42 labeled with ab201062 at 1/8000 dilution.

Lane 1: beta Amyloid (Aβ) 1-40.

Lane 2: beta Amyloid (Aβ) 1-42.

Goat Anti-Rabbit lgG, (H+L), Peroxidase conjugated (ab97051) at 1/5000 dilution was used as secondary antibody.

Blocking and diluting buffer: 5% NFDM/TBST.

Exposure time: 30 seconds.

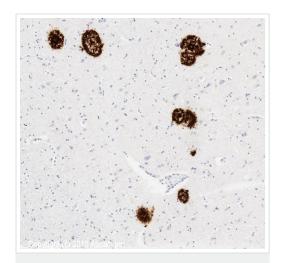
Antibody reactivity was assessed using a dot blot, which is a nonquantitative method that maintains the native conformation of beta Amyloid. Beta Amyloid 1-40 and 1-42 peptides underwent the following aggregation conditions before being spotted onto a nitrocellulose membrane and detected using ab201062:

Monomers: 0.3 mg of beta Amyloid peptide was dissolved in 30 μ l 100 mM NaOH and incubated at room temperature for 10 minutes. It was then diluted with 970 μ l of 1% SDS and boiled for five minutes.

Oligomers: 0.3 mg of beta Amyloid peptide was dissolved in 30 μ l 100 mM NaOH and incubated at room temperature for 10 minutes. It was then diluted with 970 μ l of 10 mM phosphate buffer pH 7.4 containing 0.02% sodium azide and incubated at room temperature for four days.

Fibrils: 0.3 mg of beta Amyloid peptide was dissolved in 1 ml 50% hexafluoroisopropanol (HFIP) with 0.02% sodium azide. It was then stirred constantly for nine days; the first seven with a cap on and the final two with the cap removed to allow evaporation of the HFIP. Fibrils were then sedimented at 20,000 rpm in a microcentrifuge for 20 minutes and resuspended in 1 ml of PBS + 0.02% sodium

azide.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-Amyloid Fibril antibody [mOC87] - Conformation-Specific (ab201062)

IHC image of beta Amyloid staining in human Alzheimer hippocampus formalin fixed paraffin embedded tissue section*, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab201062, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

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Lane 1

Lane 2

Dot Blot - Anti-Amyloid Fibril antibody [mOC87] - Conformation-Specific (ab201062)

Negative control (secondary ab only):

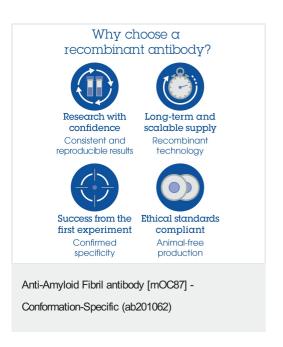
Lane 1: beta Amyloid (Aβ) 1-40.

Lane 2: beta Amyloid (Aβ) 1-42.

Goat Anti-Rabbit lgG, (H+L), Peroxidase conjugated (<u>ab97051</u>) at 1/5000 dilution was used as secondary antibody.

Blocking and diluting buffer: 5% NFDM/TBST.

Exposure time: 30 seconds.



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