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Datasheet for ABIN95037

anti-beta Amyloid antibody (N-Term)

2 Validations

7 Images

1 Publication

Overview

Quantity:	100 µg
Target:	beta Amyloid (Abeta)
Binding Specificity:	N-Term
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This beta Amyloid antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

Product Details

Immunogen:	This antibody was affinity purified from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to the amino terminus (aa 1-14) of human beta amyloid conjugated to KLH using maleimide. Immunogen Type: Peptide
Isotype:	IgG
Specificity:	This affinity-purified antibody is directed against the amino terminal end of beta amyloid and is useful in determining its presence in various assays. Polyclonal anti-beta amyloid detects human and mouse beta amyloid. Cross reactivity with beta amyloid from other species is likely but has not been determined.
Characteristics:	Beta amyloid, often abbreviated as A-beta, is a protein that builds up in the brains of persons with Alzheimer's disease, collecting in clumps called plaques or senile plaques. While some

Product Details

researchers question whether beta amyloid is the cause of the dementia, most agree that it is involved in the disruption of thinking that is a hallmark of the disease. In some cases of familial Alzheimer's disease, mutations in genes for the proteins called the presenilins lead to increased production of amyloid. Researchers have been looking at how presenilin-1 in particular contributes to the excess buildup of beta amyloid. Presenilin-1 apparently acts to increase the activity of gamma-secretase, an enzyme that changes a normal protein (amyloid precursor protein or APP) into beta amyloid itself. Furthermore, presenilin-1 might be gamma-secretase.

Purification: affinity purified

Sterility: Sterile filtered

Target Details

Target: beta Amyloid (Abeta)

Alternative Name: Beta Amyloid ([Abeta Products](#))

Background: Beta amyloid, often abbreviated as A-beta, is a protein that builds up in the brains of persons with Alzheimer's disease, collecting in clumps called plaques or senile plaques. While some researchers question whether beta amyloid is the cause of the dementia, most agree that it is involved in the disruption of thinking that is a hallmark of the disease. In some cases of familial Alzheimer's disease, mutations in genes for the proteins called the presenilins lead to increased production of amyloid. Researchers have been looking at how presenilin-1 in particular contributes to the excess buildup of beta amyloid. Presenilin-1 apparently acts to increase the activity of gamma-secretase, an enzyme that changes a normal protein (amyloid precursor protein or APP) into beta amyloid itself. Furthermore, presenilin-1 might be gamma-secretase.
Synonyms: Beta amyloid, A-beta

Gene ID: 351

NCBI Accession: [NP_000475](#)

UniProt: [P05067](#)

Pathways: [Inflammasome](#)

Application Details

Application Notes: Affinity purified anti-beta amyloid detects beta amyloid in ELISA, IHC and IF. A 40-50 kD band consistent with a higher MW precursor is detected in western blot using whole tissue extracts from mouse brain. In general, we recommend the use of 4% PFA for paraffin embedded tissues

Application Details

and 10% formalin for frozen tissue for fixation.

Comment: Gene Name: APP

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Preservative: Sodium azide

Precaution of Use: This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

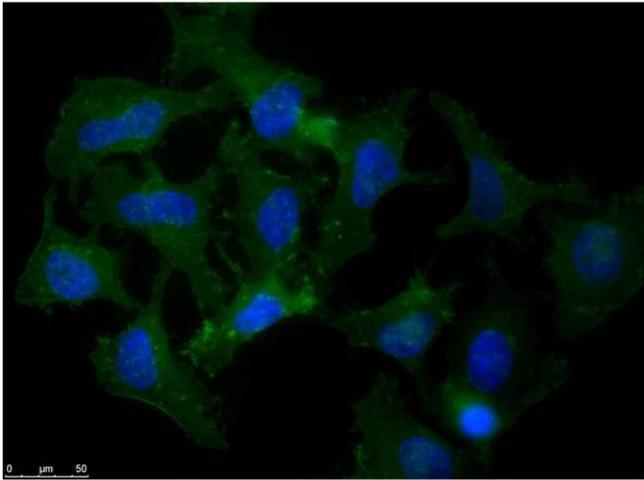
Storage: 4 °C/-20 °C

Storage Comment: Store vial at 4 °C prior to restoration. For extended storage aliquot contents and freeze at -20 °C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4 °C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening.

Expiry Date: 12 months

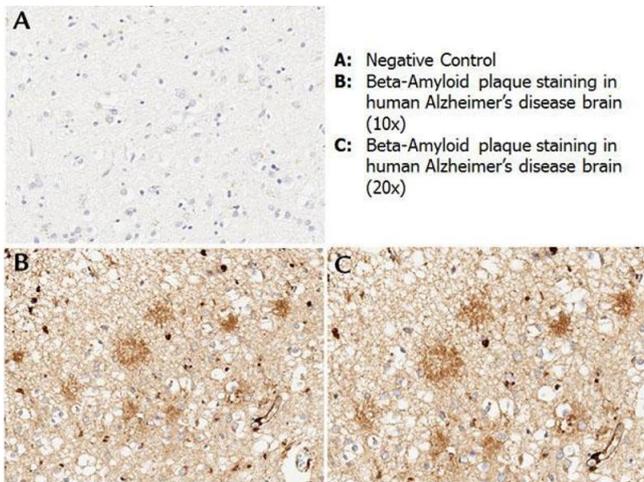
Publications

Product cited in: Yu, Pollock, Duval, Lewis, Joseph, Meade, Cavacini: "Neutralization of HIV by milk expressed antibody." in: **Journal of acquired immune deficiency syndromes (1999)**, Vol. 62, Issue 1, pp. 10-6, (2013) ([PubMed](#)).



Immunofluorescence

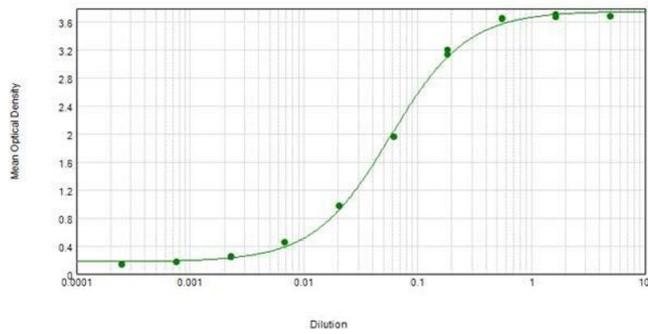
Image 1. Immunofluorescence microscopy of Rabbit Anti-Beta Amyloid antibody using HeLa cells fixed with MeOH. Anti-Beta Amyloid Antibody was used at 1 µg/mL, O/N at 4°C. Secondary antibody: Anti-RABBIT IgG 488 Conjugated Preadsorbed at 2 µg/ml for 1 h at RT. Localization: APP is a cell surface protein that rapidly becomes internalized to endosomes and lysosomes. Some APP accumulates in secretory transport vesicles. Colocalizes with other proteins in a vesicular pattern in cytoplasm and perinuclear regions. Staining: Amyloid beta as green fluorescent signal with DAPI (blue) nuclear counterstain.



Immunohistochemistry

Image 2. Immunohistochemistry with anti-beta amyloid antibody showing amyloid beta plaque staining in human Alzheimer's disease brain at 10x and 20x (B & C). Staining was performed on Leica Bond system using the standard protocol. Formalin fixed/paraffin embedded tissue sections were subjected to antigen retrieval with E1 (Leica Microsystems) retrieval solution for 20 min and then incubated with rabbit anti-beta amyloid antibody 600-401-253 at 1:100 dilution for 60 minutes. Biotinylated Anti-rabbit secondary antibody was used at 1:200 dilution to detect primary antibody. The reaction was developed using streptavidin-HRP conjugated compact polymer system and visualized with chromogen substrate, 3'3'-diamino-benzidine substrate (DAB). The sections were then counterstained with hematoxylin to detect cell nuclei.

Anti-Beta Amyloid Sensitivity



ELISA

Image 3. ELISA results of purified Rabbit anti-Beta Amyloid Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1 μ g of conjugate. The starting dilution of antibody was 5 μ g/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) and TMB ELISA Peroxidase Substrate .

Please check the [product details page](#) for more images. Overall 7 images are available for ABIN95037.



Successfully validated (Unfolding Profile (UP))

by [NanoTemper Technologies](#)

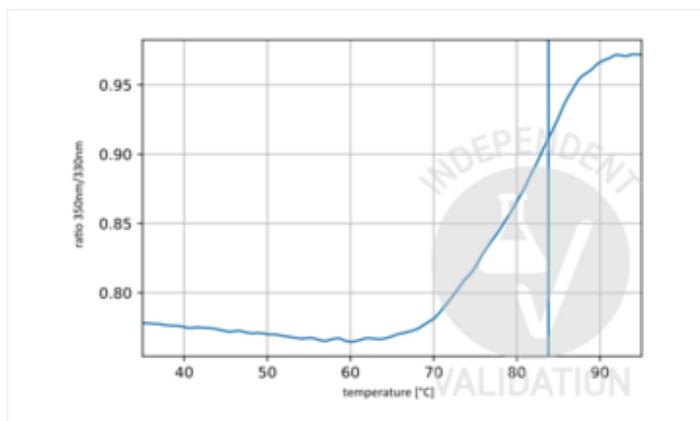
Report Number: 104082

Date: Jul 23 2019

Target:	ABETA
Method validated:	Unfolding Profile (UP)
Positive Control:	ABIN1043866
Notes:	Passed. ABIN1043866 showed T_i at 83.8°C and a clear unfolding profile with one unfolding event. This suggests that the antibody is properly folded and functional.
Protocol:	<ul style="list-style-type: none">• Load the undiluted sample into Tycho capillary (NanoTemper Technologies, TY-C001).• Run Tycho measurement.

Experimental Notes: Tycho is designed to run quick and precise protein quality check experiments. Tycho uses intrinsic protein fluorescence to follow protein unfolding while running a fast thermal ramp, yielding results in 3min. A protein's unfolding behavior is characterized by various parameters, most notably the inflection temperature (T_i). The T_i can be used to identify properly folded protein, to compare different batches, or to analyze the influence of storage/transport conditions on a protein. An absence of T_i would suggest that the protein is already unfolded and therefore most likely nonfunctional.

Image for Validation report #104082



Validation image no. 1 for anti-Amyloid beta (Abeta) (N-Term) antibody (ABIN1043866)

Unfolding profile of ABIN1043866. The fluorescence signal is plotted against temperature. The vertical line indicates the T_i at 83.8 °C.



Successfully validated (Immunohistochemistry (IHC))

by [Prof. Merighi, Laboratory of Neurobiology, Department of Veterinary Sciences, University of Turin](#)

Report Number: 104424

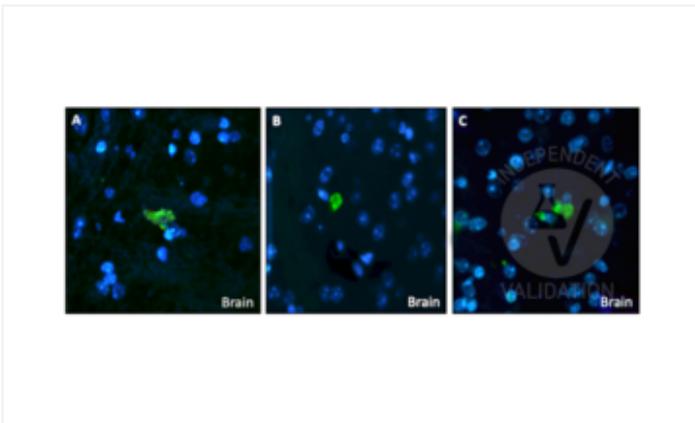
Date: May 12 2022

Target:	beta Amyloid
Lot Number:	42581
Method validated:	Immunohistochemistry (IHC)
Positive Control:	Adult (24 months) mouse brain 3-month-old Taconic mouse Model 1349 brain fixed in 4% paraformaldehyde
Negative Control:	We incubated slices overnight with the blocking solution only and then processed them with the secondary antibody.
Notes:	The beta Amyloid antibody (Amyloid beta) (N-Term) ABIN95037 works in IHC-P, especially at higher concentrations (1:20 and 1:50), and without the use of any antigen retrieval treatment.
Primary Antibody:	ABIN95037
Secondary Antibody:	goat anti-rabbit AF488-conjugated antibody (Invitrogen by Thermo Fisher Scientific, A11034, lot 1971418)
Protocol:	<ul style="list-style-type: none">• Perfuse mice with paraformaldehyde 4% in 0.1 M phosphate buffer pH 7.4 and post-fix in the same fixative for an additional 2 h at RT.• Wash, dehydrate, and embed samples in paraffin wax.• Wash several times with 0.01 M PBS.• Cut intestines and brain with a microtome into 6µm sections and mount on glass slides.• After paraffin removal, incubate sections for 1 h at RT in PBS containing 1% albumin from chicken egg white (Sigma, A5378) and 0.3% Triton-X-100 (BioRad, 161-0407, lot 00583) to block non-specific binding sites.• Incubate sections with primary anti-beta amyloid (N-Term) (antibodies Online, ABIN95037, lot 42581) diluted 1:20, 1:50, 1:100, and 1:200 in 0.1 M PBS-BSA-PLL ON at RT.• Wash sections 3x 5 min with 0.01 M PBS.• Incubate sections with secondary goat anti-rabbit AF488-conjugated antibody (Invitrogen by Thermo Fisher Scientific, A11034, lot 1971418) diluted 1:500 in 0.1 M PBS for 1 h at RT.• Wash sections 3x 5 min with 0.01M PBS.• Mount specimens in Fluoroshield (Sigma, F6182, lot MKCB0153V).• Acquire images with a fluorescence microscope and appropriate filter settings for AF488, e.g. Leica DM 6000B fluorescence microscope equipped with a digital camera at 40x

magnification.

Experimental Notes: Antigen retrieval treatment was also tested. In this case, sections were processed for microwave antigen retrieval for 10 min (95-100 °C) in 10 mM sodium citrate buffer (pH 6.0). After 20 min of spontaneous cooling, sections were washed twice for 5 min with distilled water and for 5 min with PBS.

Image for Validation report #104424



Validation image no. 1 for anti-Amyloid beta (Abeta) (N-Term) antibody (ABIN95037)

Staining of beta-amyloid positive cells in the adult mouse brain using ABIN95037 at 40x magnification.