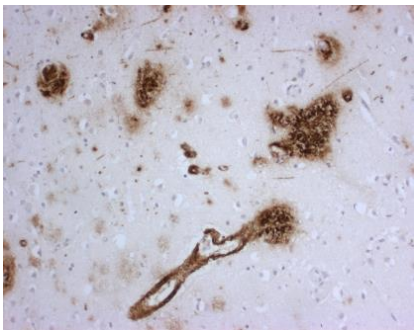
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Amyloid-beta (N-term), Human, clone VU17		
Catalog number	HM2325		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG2a	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

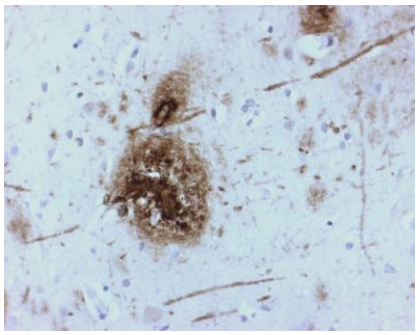
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		1,3,4				2		
Yes	●	●				●	●	●
No								
N.D.			●	●	●			

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IHC-P: Immunohistochemical analysis (10x) of amyloid beta in paraffin embedded brain tissue using mAb VU-17. Image courtesy of Dr. Samantha Loveless from the Institute of Psychological Medicine and Clinical Neurosciences, Cardiff University.



IHC-P: Immunohistochemical analysis (40x) of amyloid beta in paraffin embedded brain tissue using mAb VU-17. Image courtesy of Dr. Samantha Loveless from the Institute of Psychological Medicine and Clinical Neurosciences, Cardiff University.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IA: Antibody VU-17 can be used as capture and detection antibody.
- IHC-P: VU17 immunostainings of paraffin sections (4% Paraformaldehyde fixed) gives good results upon formic acid pre-treatment. However, antigen retrieval (autoclave; 10 min.) using either 10mM sodium citrate buffer (pH 6.0) or 10 mM Tris buffer, containing 1 mM EDTA (pH 9.0), is superior and allows the use of VU17 for double stainings in combination of antibodies specific for formic acid sensitive epitopes (Ref 1).

General Information

Description

Antibody clone VU17, formerly known as αVU Aß 17, recognizes the N-terminus of human amyloid beta (i.e. in: Aβ1-38; Aβ1-39; Aβ1-40; Aβ1-42). Alzheimer disease (AD) is the most common form of dementia, and is characterized by the intra neuronal accumulation of the microtubule-associated protein tau (MAPT), and by extracellular deposits of amyloid beta (Aß) in the brain parenchyma. Aß deposits have different appearances, ranging from loosely organized to dense-cored, deposits, also called plaques, as well as deposits in the walls of small blood vessels. The Aβ peptides are a proteolytic cleavage product of the membrane bound amyloid precursor protein (APP), upon cleavage by APP-cleaving enzyme 1 (BACE1) and the γ-secretase complex. There are multiple cleavage sites in Aβ domain leading to various fragments of 36-43 amino acids in length. Aβ is produced by various cell types and is secreted into the interstitial fluid. Aß peptides are readily detectable in cerebrospinal fuid (CSF). Aβ terminating at residue 40 (Aβ40) being approximately 10 times more abundant than Aβ42. Whereas Aβ40 levels are unchanged in AD compared to control cases, Aβ42 levels in CSF are reduced. Therefore, Aβ42 levels and the Aβ42: Aβ40 ratio in CSF are of

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diagnostic importance. Assessment of Aβ levels and co-localization of Aβ with other factors and specific cell types in brain tissue is essential for investigating the molecular mechanisms underlying AD. Antibody VU17 detects all forms of Aβ deposits without the need for formic acid pre-treatment on paraffin sections and can be applied in a double staining strategy, making it suitable for investigating co-localization. Antibody VU17 is raised against synthetic Aβ1-17, and detects a region within the first six amino acids of the N-terminus of Aβ.

Immunogen Synthetic peptide corresponding to Ab1-17

Aliases Abeta, Aβ, β-Amyloid

References

1. Verwey, N et al; Immunohistochemical characterization of novel monoclonal antibodies against the N-terminus of amyloid β-peptide. Amyloid 2013, *20*:3
2. Jongbloed, W et al; CSF Amyloid-ß oligomers in Alzheimer's disease: Diagnostic value and relation to cognitive decline. J Alzheimer's Dis. 2015 *45*:35
3. Rosenberger, A et al; Altered distribution of the EphA4 kinase in hippocampal brain tissue of patients with Alzheimer's disease correlates with pathology. Acta Neuro Com 2014 *2*:79
4. Del Campo, M et al; BRI2-BRICHOS is increased in human amyloid plaques in early stages of Alzheimer's disease. Neur Aging 2014 *35*:1596
5. Schuster, J et al; Methods for the Specific Detection and Quantitation of Amyloid-β Oligomers in Cerebrospinal Fluid. J Alzheimer Dis 2016, *53*:53

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Robbert Zwinkels	16/03/2018

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.