Catalog no  
HM2325 (lot number and expiry date are indicated on the label)

Description  
Antibody clone VU17, formerly known as αVU Aβ17, 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 (Aβ) in the brain parenchyma. Aβ 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. Aβ peptides are readily detectable in cerebrospinal fluid (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 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.

Aliases  
Abeta, Aβ, β-Amyloid

Immunogen  
Synthetic peptide corresponding to Ab1-17

Species  
Mouse IgG2a

Formulation  
1 ml (100 µg/ml) 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin and 0.02% sodium azide.

Application  

<table>
<thead>
<tr>
<th>Application</th>
<th>F</th>
<th>FC</th>
<th>FS</th>
<th>IA²</th>
<th>IF</th>
<th>IP</th>
<th>P1.3.4</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.D.</td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Application F is based on personal communication.

Application  

IHC-P: Fixation is performed using 4% paraformaldehyde. VU17 can be used for double staining (Ref1).

notes  
Immunohistochemical analysis (10x left, 40x right) 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.
References

Use
The typical starting working dilution is 1:50. Dilutions have to be optimized in user’s experimental setting.

Storage and stability
Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year. The exact expiry date is indicated on the label.

Precautions
For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.