



Alzheimers Disease B-Amyloid Protein Detection Set

Cat. No.: PSI-1812



Ψ Specifications

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| SPECIES REACTIVITY: | Human |
| IMMUNOGEN: | Rabbit polyclonal antibodies were raised against peptides corresponding to amino acid sequences from each of the corresponding proteins. |
| TESTED APPLICATIONS: | IHC, WB |
| APPLICATIONS: | These polyclonal antibodies can be used for detection of APP, BACE and BACE2 by immunoblot at 1 - 5 µgg/mL. APP and BACE antibodies can detect their respective proteins via immunohistochemistry at 2 - 10 µg/mL. |
| SPECIFICITY: | Both APP antibodies will react with the C99 fragment of APP. |

Ψ Properties

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| PURIFICATION: | Antibodies are supplied as affinity chromatography purified IgG. |
| PHYSICAL STATE: | Liquid |
| BUFFER: | PBS containing 0.02% sodium azide. |
| CONCENTRATION: | Antibody 1 mg/mL |
| STORAGE CONDITIONS: | Stable at 4 °C for three months, store at -20 °C for up to one year. |

USER NOTE:

Optimal dilutions for each application to be determined by the researcher.

 Background and References

BACKGROUND:

Accumulation of the amyloid- β peptide ($A\beta$) in the cerebral cortex is a critical event in the pathogenesis of Alzheimer's disease. The β amyloid protein precursor (APP) is cleaved by one of two β secretases (BACE and BACE2), producing a soluble derivative of the protein and a membrane anchored 99-amino acid carboxy-terminal fragment (C99). The C99 fragment serves as substrate for β secretase to generate the 4 kDa amyloid- β peptide ($A\beta$), which is deposited in the Alzheimer's disease patients' brains. BACE was identified by several groups independently and designated β -site APP cleaving enzyme (BACE). BACE is a transmembrane aspartic protease and co-localizes with APP. BACE2 also cleaves APP at β -site and at a different site within $A\beta$. BACE2 locates on chromosome 21q22.3, the so-called 'Down critical region', suggesting that BACE2 and $A\beta$ may also contribute to the pathogenesis of Down syndrome.

For images please see PDF data sheet

REFERENCES:

1) Vassar R, Bennett BD, Babu-Khan S, et al. Beta-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE. *Science* 1999; 286:735-41.

2) Sinha S, Anderson JP, Barbour R, et al. Purification and cloning of amyloid precursor protein beta-secretase from human brain. *Nature* 1999; 402:537-40.

3) Acquati F, et al. The gene encoding DRAP (BACE2), a glycosylated transmembrane protein of the aspartic protease family, maps to the down critical region. *FEBS Lett* 2000;468:59-64

4) Solans A, et al. A new aspartyl protease on 21q22.3, BACE2, is highly similar to Alzheimer's amyloid precursor protein beta-secretase. *Cytogenet Cell Genet* 2000;89:177-184.

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