

## **betaAmyloid (Abeta) (pantropic). Rabbit Antigen Immunoaffinity Purified Polyclonal , Human**

APP, ABPP, Alzheimer disease amyloid protein, Cerebral vascular amyloid peptide, CVAP, Protease nexin-II, PN-II, APPI,

### **BACKGROUND**

Beta-amyloid peptides are lipophilic metal chelators with metal-reducing activity. Bind transient metals such as copper, zinc and iron. In vitro, can reduce Cu(2+) and Fe(3+) to Cu(+) and Fe(2+), respectively. Beta-amyloid 42 is a more effective reductant than beta-amyloid 40. Beta-amyloid peptides bind to lipoproteins and apolipoproteins E and J in the CSF and to HDL particles in plasma, inhibiting metal-catalyzed oxidation of lipoproteins. Beta-APP42 may activate mononuclear phagocytes in the brain and elicit inflammatory responses. Promotes both tau aggregation and TPK II-mediated phosphorylation. Interaction with overexpressed HADH2 leads to oxidative stress and neurotoxicity.

### **ORDERING INFORMATION**

**CATALOG NUMBER**  
X1885P

**SIZE**  
100 µg

**FORM**  
Unconjugated

**Host/CLONE**  
Rabbit

**FORMULATION**  
Rabbit polyclonal immunoglobulin in Dulbecco's phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.3 (+/- 0.1). Carrier and preservative free.

**CONCENTRATION**  
1.449 mg/ml

**ISOTYPE**  
IgG

**APPLICATIONS**  
IHC, DB, RIA, EA

### **IMMUNOGEN**

The antiserum was produced against a chemically synthesized peptide corresponding to amino acids 1-40 of human Aβ.

### **SPECIES REACTIVITY**

Human

### **COMMENTS**

For IHC, we recommend using a 1:500 to 1:2000 dilution, for RIA and ELISA applications, a 1:2000 to 1:8000 dilution.. The optimal antibody concentration should be determined for each specific application.

### **STORAGE**

Product should be stored at -70°C. Aliquot to avoid freeze/thaw cycles

### **STABILITY**

Products are stable for one year from purchase when stored properly

**For research use only. Not for use in human diagnostics or therapeutics.**

**POSITIVE CONTROL/TISSUE EXPRESSION**

Recognizes the sequence of A $\beta$  [1-40] in the region from amino acids 15-30. No blocking activity was observed with A $\beta$  [1-12] whereas the peptides. A $\beta$  [14-35], A $\beta$  [15-28] and A $\beta$  [17-30] were all able to block antibody activity as well as A $\beta$  [1-40].

**SHIP CONDITIONS**

Ship on dry ice, freeze upon arrival

**REFERENCES**

- 1) DeMattos, R.B., et al. (2002) Plaque-associated disruption of CSF and plasma amyloid-beta (A beta) equilibrium in a mouse model of Alzheimer's disease. *J. Neurochem.* 81(2):229-236.
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- 3) DeMattos, R.B. et al. (2001) Peripheral anti-A $\beta$  antibody alters CNS and plasma A $\beta$  clearance and decreases brains A $\beta$  burden in a mouse model of Alzheimer's disease. *Proc. Nat'l. Acad. Sci. USA* 98 (15):8850-8855.
- 4) Savage, M.J. et al. (1998) Turnover of amyloid  $\beta$ -protein in mouse brain and acute reduction of its level by phorbol ester. *J. Neurosci.* 18:1743-1752.
- 5) Borchelt, D.R. et al. (1997) Accelerated amyloid deposition in the brains of transgenic mice coexpressing mutant presenilin 1 and amyloid precursor proteins. *Neuron* 19:939-945.

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