BACKGROUND

Amyloid beta peptide is the major constituent of amyloid plaques in the brains of individuals afflicted with Alzheimer and quote;s disease. This peptide is generated from the beta-amyloid precursor protein (beta APP) in a two-step process. The first step involves cleavage of the extracellular, amino-terminal domain of beta APP. Protein cleavage is performed by an aspartyl protease termed beta-secretase (BACE). This enzyme is synthesized as a propeptide that must be modified to the mature and active form by the prohormone convertase, furin. Beta APP cleavage by the mature form of BACE results in the cellular secretion of a segment of beta APP and a membrane-bound remnant. This remnant is then processed by another protease termed gamma-secretase. Gamma-secretase cleaves an intra-membrane site in the carboxyl-terminal domain of beta APP, thus generating the amyloid beta peptide. Gamma-secretase is believed to be a multi-subunit complex containing presenilin-1 and 2 as central components. Found associated with the presenilins is the transmembrane glycoprotein nicastrin. Nicastrin has been found to bind to the carboxyl-terminus of betaAPP and helps to modulate the production of the amyloid beta peptide.

IMMUNOGEN

A 40 to 43 amino acid peptide cleaved from amyloid precursor protein (APP).

POSITIVE CONTROL/TISSUE EXPRESSION

Specificity: Alzheimer’s Disease (AD) is characterized by the presence of extracellular plaques and intracellular neurofibrillary tangles (NFTs) in the brain. The major component of these plaques is Aβ peptide (β-amyloid), a 40 to 43 amino acid peptide cleaved from amyloid precursor protein (APP). Increased release of the ‘longer forms’ of Aβ peptide, Aβ42 or Aβ43, which have a greater tendency to aggregate than Aβ40, occurs in...
**PURIFICATION**
Purified from rabbit serum by epitope-specific affinity chromatography. Any reactivity towards both full length Aβ40 (β-amyloid 1-40) and Aβ42 (β-amyloid 1-42) has been eliminated through a series of preabsorption steps.

**SHIP CONDITIONS**
Ship at ambient temperature, freeze upon arrival

**STORAGE CUSTOMER**
Product should be stored at -80°C. Aliquot to avoid freeze/thaw cycles

**STABILITY**
Products are stable for one year from purchase when stored properly

**REFERENCES**

**PRODUCT SPECIFIC REFERENCES**