

Product Specification Sheet

Human Beta-Amyloid 1-42 & 42-1 (reverse peptide)

Cat. # BAM422-P100	Human Beta-Amyloid 1-42 (full length, 42 aa)	SIZE: 1 mg
Cat. # SP-53819-1	Human Beta-Amyloid 42-1 (reverse control peptide 1-42)	SIZE: 1 mg

Alzheimer's Disease (AD) is a neurodegenerative disorder characterized by progressive loss of memory and cognition in the elderly. One of the most important and initial step involves proteolytic cleavage of amyloid precursor protein (APP, chromosome 21) releasing short 40, 42 & 43 aa peptides (beta amyloid1-40, 1-42, and 1-43). Polymerization of b-amyloid (Ab) and subsequent neuronal deposit (amyloid) leads to the degeneration of neurons involved in memory and cognition. Ab deposits have also been found to contain 2 additional proteins termed α -synuclein and β -synuclein. The 140 aa α -synuclein is identical with non- Ab component (NACP) of AD. The 134 aa human β -synuclein is homologous to 14 kDa bovine phosphoneuroprotein 14. Mutations in α -synuclein gene causing a replacement of alanine with a threonine may cause the protein to misfold. Synucleins are primarily expressed in the brain. At least 3 forms: two large (140 aa SYN-1 & 149 aa SYN-2) and a small form (SYN-3, 42 aa) are produced by alternative splicing.

Source of Antigen and Antibodies

Cat # BAM422-P

Full-length human β -1-42 (42 aa,) peptide (purity >95%, mol wt. 4514) should be dissolved in 0.1 M Acetic acid and then diluted further in PBS or other buffers.

Sequence Asp-Ala-Glu-Phe-Arg-His-Asp-Ser-Gly-Tyr-Glu-Val-His-His-Gln-Lys-Leu-Val-Phe-Phe-Ala-Glu-Asp-Val-Gly-Ser-Asn-Lys-Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val-Ile-Ala

MW 4514.1

Formula $C_{203}H_{311}N_{55}O_{60}S_1$

Purity >95%

Cat # SP-83819-1

Full-length human β -1-42 (42 aa,) peptide (purity >95%, mol wt. 4514) should be dissolved in 0.1 M Acetic acid and then diluted further in PBS or other buffers.

Sequence Ala-Ile-Val-Val-Gly-Gly-Val-Met-Leu-Gly-Ile-Ile-Ala-Gly-Lys-Asn-Ser-Gly-Val-Asp-Glu-Ala-Phe-Phe-Val-Leu-Lys-Gln-His-His-Val-Glu-Tyr-Gly-Ser-Asp-His-Arg-Phe-Glu-Ala-Asp

MW 4514.1

Formula $C_{203}H_{311}N_{55}O_{60}S_1$

Purity >95%

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder

Recommended Usage

ELISA or Western

References Neve R et al (1992) PNAS 89, 3448; Goldgaber D et al (1987) Science 235, 877; Yankner B et al (1989) Science 245, 417; Golde T et al (1992) Science 255, 728; Wang R et al (1991) J. Biol. Chem. 266, 16960, Shigematus K et al (1992) J Neurosci. 31, 443; kang J et al (1987) Nature 325, 733; Tanzi r et al (1987) Science 235, 880; Weidmann A et al (1989) Cell 57, 115;

2. Citations for ADI Antibodies (see updates at the web site)

D'Andrea MR, 2003, Neurosci. Lett. 342, 114-118, , IHC, D'Andrea MR, 2002, Neurosci. Lett. 19, 323, 45-49, , IHC, Klementiev B, 2007, Neuroscience, Volume 145, Issue 1, 2 March 2007, Pages 209-224, , IHC Iijima K, 2004, Proc. Natl. Acad. Sci. 101: 6623 - 6628, WB, IHC, Seclen D, 2004, Brain, 127: 439 - 451, , IHC, Shimada A, 2007, Neuropathol. Applied Neurobiol. IHC

*This product is for In vitro research use only.

Related material available from ADI

Ant-Beta amyloid 1-40, 1-42, APP, Parkin, Synucleins (α , β , γ), Presenilins 1, 2

SP-53819-1 101110A