



## Product Data Sheet

---

**Product Name:**  $\beta$ -Amyloid (1-40)  
**Catalog Number:** AS-24235 (0.5 mg) Lot Number: See label on vial  
AS-24236 (1 mg)  
AS-24236-5 (5 mg)

**Sequence:** H-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-OH (3-letter code)  
DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV (1-letter code)

**Molecular Weight:** 4329.9

**% Peak Area by HPLC:**  $\geq 95$

**Appearance:** Lyophilized white powder

**Peptide Reconstitution:** Use 1.0% NH<sub>4</sub>OH as the solvent, followed by buffer (i.e. 1XPBS). Add 1.0% NH<sub>4</sub>OH directly to the lyophilized peptide powder (add 35-40  $\mu$ l to 0.5 mg peptide or 70-80  $\mu$ l to 1 mg peptide). The peptide cannot be stored long term in 1.0% NH<sub>4</sub>OH, and it is therefore important to immediately dilute this solution with 1X PBS or other buffer to a concentration of approximately 1mg/mL or less. Gently vortex to mix.

**Storage:** Peptide is shipped at ambient temperature. Upon receipt, store lyophilized powder at  $-20^{\circ}\text{C}$  or lower. Reconstituted peptide should be aliquoted into several freezer vials and stored at  $-20^{\circ}\text{C}$  or lower. Do not freeze thaw.

**Description:**  $\beta$ -Amyloid (1-40) together with  $\beta$ -Amyloid (1-42) are two major C-terminal variants of the  $\beta$ -Amyloid protein constituting the majority of  $\beta$ -Amyloids. These undergo post-secretory aggregation and deposition in the Alzheimer's disease brain. Ref: Nagele, R. et al. *Neurosci.* **110**, 199 (2002); Garzon-Rodriguez, W. et al. *J. Biol. Chem.* **272**, 21037 (1997).

**Additional Information:** Listed below are relevant information that may provide a guideline on how to use this product. End users will have to adapt to their own specific applications.

A $\beta$  peptide (A $\beta$ 1-40) was purchased from AnaSpec (San Jose, CA, USA). A $\beta$  (1-40) was prepared as a 0.5 mM (1 mg/460  $\mu$ L) stock solution in milli-Q water and filtered through a 0.22  $\mu$ m filter (Millipore, USA). The solution was held at 4  $^{\circ}\text{C}$  for 60 h and then incubated at 37  $^{\circ}\text{C}$  for 8 h with gentle mixing every 2 h to accelerate aggregation. After 6 aggregation, the solution was separated into aliquots (10  $\mu$ l) in sterile Eppendorf tubes and stored at  $-20^{\circ}\text{C}$ . [Ho, CC. et al. \*Food Chem\* \*\*114\*\*, 246 \(2008\).](#)

A $\beta$  (1-16), A $\beta$  (1-28), A $\beta$  (17-40), A $\beta$  (1-40) peptides were obtained from AnaSpec Inc. (CA, USA, purity index  $> 95\%$ ). Aliquots of A $\beta$ -peptides were dissolved in a 10 mM N-ethylmorpholine (NEMO) buffer, which was proved not to interfere with metal binding. We obtained a final 0.5-1 mM peptide concentration at pH=7. [Minicozzi, V. et al. \*J Biol Chem\* \*\*10.1074/jbc.M707109200\*\* \(2008\).](#)

A $\beta$  (1-40) peptide was obtained from AnaSpec (San Jose, CA, USA). Lyophilized A $\beta$  (1-40) peptide was stored desiccated at  $-20^{\circ}\text{C}$  until reconstitution in 50 mmol/L NaOH at a

concentration of 2 mg/mL to minimize the formation of small aggregates. Pre-existing aggregates were removed by SEC on a Superdex 75 HR10/30 column (GE Healthcare, Piscataway, NJ, USA) equilibrated in 40 mmol/L Tris-HCl buffer (pH 8.0) and pre-treated with 1 mg BSA to reduce non-specific binding of A $\beta$  (1-40) to the resin. [Gonzales-Velasquez, FJ. et al. \*J Neurochem\* 10.1111/j.1471-4159.2007.04988.x \(2007\).](#)

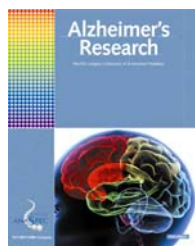
Samples of 1 mg of A $\beta$  (1-40) powder (purchased from AnaSpec, Inc.) were dissolved in 0.2 ml of trifluoroacetic acid and gently stirred at 5 °C for 3 h to completely dissolve associated peptides. [Carrotta, R. et al. \*J Biol Chem\* 280, 30001 \(2005\).](#)

A $\beta$  (1-40) was purchased from AnaSpec (San Jose, CA). Lyophilized A $\beta$  (1-40) was solubilized at a concentration of 2.8mM using prefiltered 8M urea, pH 10. After 10 min, samples were diluted to 140 mM A $\beta$  into filtered PBSA. [Kim, JR. et al. \*Biophys J\* 86, 3194 \(2004\).](#)

#### Published Citations:

[Dillen, L. et al. \*Bioanalysis\* 3, 45 \(2011\).](#)  
[Hoi, C. et al. \*Phytother Res\* 24, 10 \(2010\).](#)  
[Keshet, B. et al. \*Biotech Bioengineer\* 106, 333 \(2010\).](#)  
[Vargas, T. et al. \*J Biomed Biotech\* 10.1155/2010/805405 \(2010\).](#)  
[Davis, T.J. et al. \*Mol Pharmacol\* 10.1124/mol.109.055301 \(2009\).](#)  
[Liu, L. et al. \*PEDS\* 22, 479 \(2009\).](#)  
[Liu, L. et al. \*Protein Eng Des Sel\* 22, 479 \(2009\).](#)  
[Muresan, V. et al. \*J Neurosci\* 29, 3565 \(2009\).](#)  
[Andras, IE. et al. \*Mol Pharmacol\* 10.1124/mol.107.042028 \(2008\).](#)  
[Ho, CC. et al. \*Food Chem\* 114, 246 \(2008\).](#)  
[Minicozzi, V. et al. \*J Biol Chem\* 10.1074/jbc.M707109200 \(2008\).](#)  
[Gonzales-Velasquez, FJ. et al. \*J Neurochem\* 10.1111/j.1471-4159.2007.04988.x \(2007\).](#)  
[Guo, J-P. et al. \*Proc Natl Acad Sci\* 103, 1953 \(2006\).](#)  
[Jacobsen, JS. et al. \*Proc Natl Acad Sci\* 103, 5161 \(2006\).](#)  
[Carrotta, R. et al. \*J Biol Chem\* 280, 30001 \(2005\).](#)  
[Osada, Y. et al. \*J Biol Chem\* 280, 8596 \(2005\).](#)  
[Boros, S. et al. \*FEBS Lett\* 576, 57 \(2004\).](#)  
[Ege, C. et al. \*Biophys J\* 87, 1732 \(2004\).](#)  
[Kim, JR. et al. \*Biophys J\* 86, 3194 \(2004\).](#)  
[Watanabi, N. et al. \*FASEB J\* 18, 1013 \(2004\).](#)  
[Kim, JR. et al. \*J Biol Chem\* 278, 40730 \(2003\).](#)  
[Ji, SR. et al. \*J Biol Chem\* 277, 6273 \(2002\).](#)  
[Nakagami, Y. et al. \*Eur J Pharma\* 457, 11 \(2002\).](#)  
[Kajkowski, EM. et al. \*J Biol Chem\* 276, 18748 \(2001\).](#)  
[Pallitto, MM. et al. \*Biophys J\* 8, 185 \(2001\).](#)  
[Liang, JJN. \*FEBS Lett\* 484, 98 \(2000\).](#)  
[Satoh, K. et al. \*Neurosci Lett\* 283, 221 \(2000\).](#)  
[Stege, GJJ. et al. \*BBRC\* 262, 152 \(1999\).](#)  
[Bradt, BM. et al. \*J Exp Med\* 188, 431 \(1998\).](#)

#### Related Products:



Click Alzheimer's Research Brochure to view the full listing

*For Research Use Only*