

Beta-Amyloid Abeta1-42 Peptide, HFIP-treated

Catalogue No.:	PE-1749-50
Description:	THIS PRODUCT IS TEMPORARILY OUT OF STOCK. PLEASE REFER TO THE "REPLACED BY" FIELD BELOW TO LOCATE THE CURRENT BIOSENSIS PRODUCT TO MEET YOUR RESEARCH NEEDS. Synthetic beta-amyloid Abeta1-42 was monomerized by HFIP (hexafluoro-2-propanol) treatment and dried. One vial contains 50 ug monomeric Abeta peptide that can be used to form solutions of unaggregated Abeta monomers, aggregated Abeta oligomers, Abeta fibrils and Abeta protein complexes according to published protocols, and used in a variety of research applications.
Related products:	Oligomeric Abeta ELISA Kit (BEK-2215) ApoE/Abeta Complex ELISA kit (BEK-2224) Oligomeric Abeta Peptide, stabilized (PE-1750-1000) MOAB-2 Mouse Monoclonal Antibody to Abeta Peptide (Abeta1-40/42, M-1586-100)
Batch No.:	See product label. Each lot is tested by ELISA assay and validated for oligomer formation (Oligomeric A β ELISA Kit, cat# BEK-2215).
Unit size:	3 vials. 1 x 50 ug Abeta1-42 peptide; 1 x 100 uL Reconstituting Buffer, 1 x 1 mL Dilution Buffer
Sequence:	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA
Other Names:	Beta-APP42; Beta-amyloid protein 42; ABPP; APPI; Amyloid beta A4 protein; AB42; abeta
Accession:	P05067 A4_HUMAN;
Produced in:	Synthetic
Molecular Weight:	4.5 kDa (monomer)
Applications:	Preparation of unaggregated A-beta1-42: Important: unaggregated A-beta has to be prepared just prior to use! 1. Add 5 uL of reconstituting buffer to one vial of 50 ug of HFIP-treated A-beta peptide; spin down the liquid briefly 2. Vortex the vial for 5 seconds at highest speed while rotating the vial with your hands; spin down the liquid (bench-top microcentrifuge) and repeat the vortex-spin procedure for a minimum of 3 times; continue the vortex-spin procedure until all lyophilized peptide is dissolved and collected at the bottom of the tube. Important: refer to the attached instructions for a detailed procedure to ensure that all peptide is fully reconstituted! 3. Add 106 uL of cold Dilution Buffer to make up to 111 uL total volume and a peptide concentration of 100 uM. Vortex-spin for 3 more times 4. Final concentration of A-beta is 450 ug/mL 5. Use reconstituted peptide immediately to avoid oligomer formation Preparation of oligomeric A-beta1-42: 1. Add 5 uL of reconstituting buffer to one vial of 50 ug of HFIP-treated A-beta peptide; spin down the liquid briefly 2. Vortex the vial for 5 seconds at highest speed while rotating the vial with your hands; spin down the liquid (bench-top microcentrifuge) and repeat the vortex-spin procedure for a minimum of 3 times; continue the vortex-spin procedure until all lyophilized peptide is dissolved and collected at the bottom of the tube. Important: refer to the attached instructions for a detailed procedure to ensure that all peptide is fully reconstituted! 3. Add 106 uL of cold Dilution Buffer to make up to 111 uL total volume and a peptide concentration of 100 uM 4. Vortex-spin for 3 more times 5. Incubate the solution at 2-8C for 24 hours (protected from light) 6. Final concentration of A-beta is 450 ug/mL 7. Once reconstituted and oligomerized, o-A-beta should be used as soon as possible and within 7 days

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to ensure the stability of the oligomers Note: while the concentration of monomeric A-beta peptide used to form the oligomeric complexes is accurately determined, the precise formation, size and number of oligomers cannot be quantified by any known method. Preparation of fibrillar A-beta1-42:1. Add 5 uL of reconstituting buffer to one vial of 50 ug of HFIP-treated A-beta peptide; spin down the liquid briefly 2. Vortex the vial for 5 seconds at highest speed while rotating the vial with your hands; spin down the liquid (bench-top microcentrifuge) and repeat the vortex-spin procedure for a minimum of 3 times; continue the vortex-spin procedure until all lyophilized peptide is dissolved and collected at the bottom of the tube. Important: refer to the attached instructions for a detailed procedure to ensure that all peptide is fully reconstituted! 3. Add 106 uL of 10 mM HCl to make up to 111 uL total volume and a peptide concentration of 100 uM 4. Vortex-spin for 3 more times 5. Incubate the solution at 37C for 24 hours (protected from light) 6. Final concentration of A-beta is 450 ug/mL Preparation of A-beta1-42 Complexes: Important: only unaggregated A-beta will form complexes. Use A-beta peptide immediately after reconstitution to form complexes. 1. Add 5 uL of reconstituting buffer to one vial of 50 ug of HFIP-treated A-beta peptide; spin down the liquid briefly 2. Vortex the vial for 5 seconds at highest speed while rotating the vial with your hands; spin down the liquid (bench-top microcentrifuge) and repeat the vortex-spin procedure for a minimum of 3 times; continue the vortex-spin procedure until all lyophilized peptide is dissolved and collected at the bottom of the tube. Important: refer to the attached instructions for a detailed procedure to ensure that all peptide is fully reconstituted! 3. Add 106 uL of cold Dilution Buffer to make up to 111 uL total volume and a peptide concentration of 100 uM 4. Vortex-spin for 3 more times 5. Use reconstituted peptide immediately to avoid oligomer formation 6. Mix the A-beta monomer with its complex partner (eg., lipoprotein) at desired concentrations in PBS, pH 7.4, or other suitable buffers compatible with its intended application 7. Incubate at room temperature for 2 hours without shaking 8. Use complexes immediately after incubation These protocols are based on procedures published by Youmans KL et al., 2012 and Tai LM et al., 2013, and we refer to these publications and other relevant literature for further details. Provided working concentrations are only meant to guide the user. Optimal concentrations depend on the experimental design and need to be determined empirically.

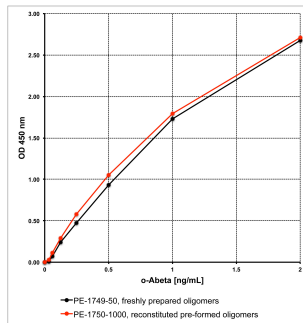
Form:	Lyophilized.
Appearance:	Translucent film or droplets, dry, without preservatives.
Reconstitution:	Varies, dependent on intended use. Refer to Applications.
Storage:	Store unopened, dry A-beta peptide vial with desiccant, insulated, at -20C short term, -80C long term. Store the buffers at 2-8C, do not freeze.
Expiry Date:	Stability of unopened vials is 1 year if stored appropriately.
References:	Youmans KL. et al. (2012) Intraneuronal Abeta detection in 5xFAD mice by a new Abeta-specific antibody. Mol Neurodegener. 2012 Mar 16;7(1):8.

Tai LM. et al. (2013) Levels of Soluble Apolipoprotein E/Amyloid-beta (A β) Complex Are Reduced and Oligomeric Abeta Increased with APOE4 and Alzheimer Disease in a Transgenic

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Mouse Model and Human Samples. J Biol Chem. 2013 Feb 22;288(8):5914-26.



Oligomeric A-beta standard curves generated with BEK-2215 (Oligomeric A beta ELISA kit). Pre-formed oligomers (PE-1750-1000) were reconstituted in assay buffer and compared to oligomers freshly prepared from HFIP-treated A-beta peptide (PE-1749-50). This data demonstrates the usefulness of PE-1749-50 as oligomeric A-beta protein standard.

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