

Human β -Amyloid Peptide (1-40)

Catalog# / Size	932601 / 500 μ g 932602 / 1 mg
Regulatory Status	RUO
Other Names	AAA, ABETA, ABPP, AD1, APPI, CTFgamma, CVAP, PN-II, PN2, Amyloid beta A4 protein, preA4, protease nexin-II, peptidase nexin-II, beta-amyloid peptide, alzheimer disease amyloid protein, cerebral vascular amyloid peptide, APP, Amyloid Precursor Protein
Description	Amyloid Beta ($A\beta$) peptides are derived from amyloid precursor proteins (APP) through sequential proteolytic cleavage of APP by β - and γ -secretases generating diverse $A\beta$ species. $A\beta$ can aggregate to form soluble oligomeric species and insoluble fibrillar or amorphous assemblies. Some forms of the aggregated peptides are toxic to neurons. Alzheimer's disease is characterized by the accumulation of aggregated $A\beta$ peptides in senile plaques and vascular deposits.

Product Details

Reactivity	Human
Source	Chemically Synthesized
Molecular Mass	4329.9
Purity	$\geq 95\%$, % Peak Area by HPLC
Formulation	Lyophilized white powder
Storage & Handling	Peptide is shipped at ambient temperature. Upon receipt, store lyophilized powder at $\leq -20^\circ\text{C}$. Reconstituted peptide should be aliquoted and stored at $\leq -20^\circ\text{C}$. Do not freeze/thaw. Peptide reconstitution: It is recommended to use 1% NH_4OH as the solvent followed by immediate dilution in buffer (i.e. PBS). Add 1% NH_4OH directly to the lyophilized powder (add 35-40 μL to 0.5mg or 70-80 μL to 1.0 mg), then immediately dilute the solution in your buffer to a concentration of 1.0 mg/mL or less. The peptide cannot be stored in 1% NH_4OH long-term.
Application	Direct ELISA Assay
Recommended Usage	Validated in Direct ELISA as coating peptide. The peptide may also be useful in additional applications such as Western Blot and Immunoprecipitation. Optimal conditions to be determined by end user.
Application Notes	Direct ELISA: Peptide Coat Concentration 0.2 mg/mL

Antigen Details

Structure	$A\beta$ denotes peptides of 36-43 amino acids generated from cleavage of APP by secretases. $A\beta$ has an apparent molecular mass of about 4 kD.
Distribution	Tissue sources: Primarily nervous system, but also adipose tissue, intestine, and muscle. Distribution: Cytosol, endosomes, nucleus, plasma membrane, extracellular, and golgi apparatus.
Function	The normal function of $A\beta$ is not well understood. Several potential physiological roles have been proposed, including: activation of kinase enzymes; protection against oxidative stress; regulation of cholesterol transport; transcription factor, and as an anti-microbial agent.
Biology Area	Cell Biology, Neurodegeneration, Neuroscience, Protein Misfolding and Aggregation
Molecular Family	APP/ β -Amyloid
Antigen References	<ol style="list-style-type: none"> 1. Kumar A, <i>et al.</i> 2015. Pharmacol. Rep. 67(2):195. 2. Sadigh-Eteghad S, <i>et al.</i> 2015. Med. Princ. Pract. 24(1):1

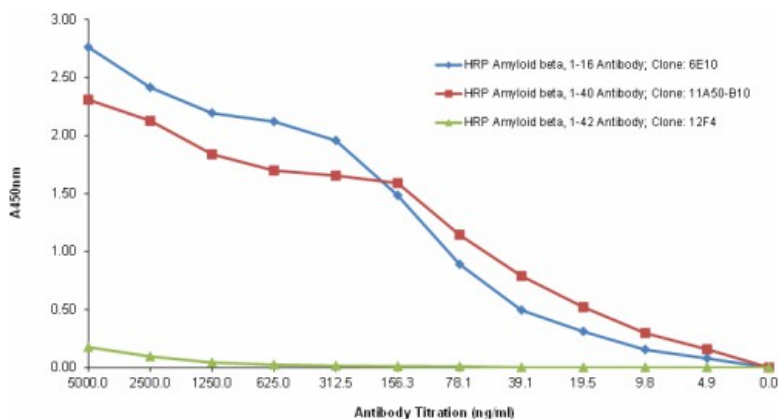
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6. Walsh DM, et al. 2007. *J. Neurochem.* 101(5):1172.

Gene ID [351](#)

Related Protocols

[Sandwich ELISA Protocol](#)

Product Data



Direct ELISA of HRP anti- β -Amyloid, 1-16 Antibody (clone 6E10; Cat. No. 803011), HRP anti- β -Amyloid, 1-40 Antibody (clone 11A50-B10; Cat. No. 805407), and HRP anti- β -Amyloid, 1-42 Antibody (clone 12F4; Cat. No. 805507) binding to plate-immobilized Human β -Amyloid Peptide (1-40). ELISA was performed by coating wells with 10 ng of Human β -Amyloid Peptide (1-40). The wells were then incubated with the primary antibodies at 37°C for 45 minutes. TMB (3, 3', 5, 5' tetramethylbenzidine, Cat. No. 421501) was used as the detection system.

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