Alzheimer's Research

World's Largest Collection of β-Amyloid Peptides

2nd edition

EUROGENTEC Group
ANASPEC

ISO 9001:2008

Table of Contents

Introduction 1

β-Amyloid (1-43) to (1-49) and (1-55) Peptides 2

β-Amyloid (1-42) and Related Peptides 2

β-Amyloid (1-40) and Related Peptides 5

β-Amyloid (1-28) and Related Peptides 8

β-Amyloid Peptide Fragments 9

β-Amyloid Peptides - Mouse/Rat. 13

Biotin Labeled β-Amyloid Peptides 14

ClearPoint™ Heavy Isotope Labeled β-Amyloid Peptides. 15

Substrates and Inhibitors 15

Amyloid Precursor Protein (APP) & Amyloid Precursor-Like Protein (APLP) Peptides. 16

α-Synuclein and β-Secretase Recombinant Proteins. 16

DHL™ Fluorescent β-Amyloid Sampler Kits. 17

SensoLyte® 520 α-Secretase or TACE Assay Kit 18

SensoLyte® 520 β-Secretase Assay Kit 19

Tau and Other Alzheimer's Disease Related Antibodies 20

Vital Stains for β-Amyloids . . . . . Back Cover

Abbreviations:

AMCA	7-Amino-4-methylcoumarinyl
DABCYL	4-(4-Dimethylaminophenylazo)benzoyl
Dap(Dnp)	L-α,β-Diaminopropionyl(2,4-Dinitrophenyl)
DEAC	(7-Diethylaminocoumarin-3-yl)carbonyl
EDANS	5-[(2-Aminoethyl)amino]naphthalene-1-sulfonyl acid
Ex/Em	Excitation/Emission
5-FAM	5-Carboxyfluoresceinyl
FRET	Fluorescence Resonance Energy Transfer
LC	6-Aminohexanoyl
MCA	(7-Methoxycoumarin-4-yl)acetyl
Me	Methyl
Met(O)	L-Methionine Sulfoxide
Nle	Norleucine
Pyr (pGlu)	L-Pyroglutamyl
5-ROX	5-Carboxy-X-rhodaminyl
5-TAMRA	5-Carboxytetramethylrhodaminyl

Introduction

ß-Amyloid (Aß) peptides are generated as cleavage products 39 to 43 amino acids in length from the membrane protein, Amyloid Precursor Protein (APP) by two proteases, ß-secretase and γ-secretase (1-3). While only a small amount is processed by β-Secretase, also known as BACE1 (β-secretase APP cleaving enzyme) or memapsin, APP is predominantly processed by α-Secretase, producing a 83-amino acid C-terminal fragment, C83. Subsequent cleavage of C83 by γ-secretase produces a non-toxic N-terminal 3kD protein (1-2).

Aßs are amphiphilic peptides with a hydrophilic N-terminal domain (residues 1 to 28) and a hydrophobic C-terminal (residues 29 to 40-42), the latter corresponding to a part of the transmembrane domain of APP (4). ß-Amyloid assembly into fibrils is initiated by a conformational transition from random coil to ß-sheet (hence the name ß-amyloid) and a nucleation-dependent aggregation process (4). Aß peptides that are 39 to 42 amino acid residues in length with a molecular mass of approximately 4 kDa are the core components of neuritic plaques seen in Alzheimer's disease (AD) brains. The presence of excess amount of Aß deposits and neurofibrillary tangles, NFTs (5-6), comprising of hyperphosphorylated Tau proteins are the hallmarks of an AD brain (1).

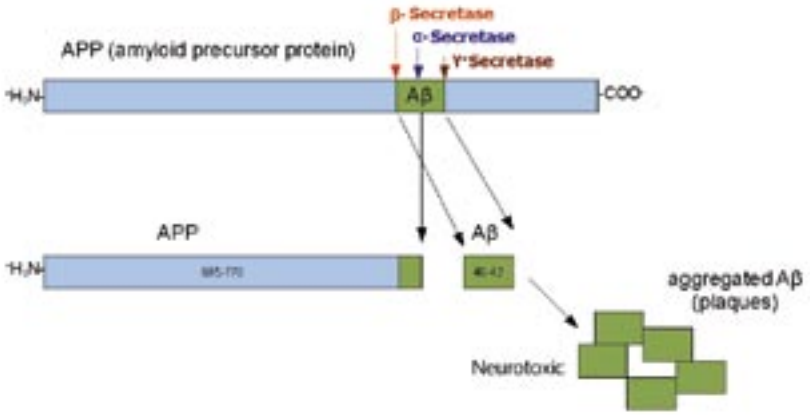

Figure 1. A schematic diagram of the amyloid precursor protein (APP) and the cleavage sites of α, β and γ-secretases (diagram modified from *Wikipedia: The free encyclopedia*. (2008, Mar 12). FL: Wikimedia Foundation, Inc. Retrieved March 12, 2008, from http://en.wikipedia.org/wiki/Image:APP_cleavage.png).

Harnessing over a decade's worth of experience and a multi-level technology platform that includes peptides, antibodies, dyes, and assay kits, AnaSpec is one of the world's most trusted sources of integrated proteomics solutions specifically designed for Alzheimer's Disease research. From the world's largest collection of β-amyloid peptides to the industry's most sensitive assay kits for α- and β-Secretase detection, this second edition of the Alzheimer's Research brochure offers an expanded view of AnaSpec's wide array of Alzheimer's related research solutions.

Peptides
- World's largest collection of ß-amyloid peptides
- Longest commercially available ß-amyloid fragments: (1-43) to (1-53)
- The three most studied fragments: ß-amyloid (1-42), ß-amyloid (1-40), ß-amyloid (1-28)
- Heavy-isotope labeled ClearPoint™ ß-amyloid peptides
- Related products, including analogs and a spectrum of dye-labeled ß-amyloid peptides of different lengths; and APP fragments and humanins

Recombinant Proteins
- α-Synucleins
- β-Secretase

Antibodies
- 36 anti-Tau antibodies, both phospho and non-phospho-specific.
- Other AD-related antibodies

Assay Kits & Dyes
- DHL™ Fluorescent ß-Amyloid Sampler kits for (1-40) and (1-42)
- SensoLyte® 520 α-Secretase Assay Kit and SensoLyte® 520 ß-Secretase Assay Kit – Industry's Highest Sensitivity
- Congo Red, Thioflavin T and their derivatives for labeling amyloid fibrils

References:
1. Selkoe DJ. *Nature* **399**, A23 (1999).
2. Suh, Y-H. and F. Checler, *Pharmacol. Rev.* **54**, 469 (2002).
3. Kang, J. et al. *Nature* **325**, 733 (1987).
4. Jarrett, JT. et al. *Biochem.* **32**, 4693 (1993).
5. Masters, CL. et al. *EMBO J.* **4**, 2757 (1985).
6. Braak, H. et al. *Acta. Neuropathol.* **87**, 554 (1994).

ß-Amyloid (1-43) to (1-49) & (1-55) Peptides

AnaSpec is proud to be the industry's first provider of β-amyloid peptides for sequences longer than 1-44. Notoriously difficult to synthesize due to a C-terminus sequence composed primarily of hydrophobic amino acids, these Aβs fragments are products of novel cleavage sites (ε and ζ) downstream of the γ–cleavage site.

Ref: Qi-Takahara, Y. et al. *J. Neurosci.* **25**, 436 (2005); Zhao, G. et al. *J. Biol. Chem.* **280**, 37689 (2005).

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-43)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIAT	4615.2	25356 (0.5 mg) 25357 (1 mg)
ß-Amyloid (1-43), scrambled	TAIAEGDSHVLKEGAYMEIFDVQGHVFGGKIFRVVDLGSHNVA	4615.2	25384 (0.5 mg) 25385 (1 mg)
ß-Amyloid (1-44)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATV	4714.4	61966-01 (0.1 mg)
ß-Amyloid (1-45)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVI	4827.5	61956-01 (0.1 mg)
ß-Amyloid (1-46)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIV	4926.6	62076-01 (0.1 mg)
ß-Amyloid (1-47)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVI	5039.8	61964-01 (0.1 mg)
ß-Amyloid (1-48)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVIT	5140.9	61965-01 (0.1 mg)
ß-Amyloid (1-49)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITL	5254.1	61963-01 (0.1 mg)
ß-Amyloid (1-55)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITLVMLKKK	5982.1	63335 (0.1 mg)
ß-Amyloid, mouse/rat	*Mouse and rat specific sequences can be found under "ß-Amyloids - Mouse/Rat" section.*		

ß-Amyloid (1-42) and Related Peptides

Aß (1-42), a major component of amyloid plaques, accumulates in neurons of Alzheimer's disease (AD) brains. Biochemical analysis of the amyloid peptides isolated from AD brain indicates that Aß (1-42) is the principal species associated with senile plaque amyloids, while Aß (1-40) is more abundant in cerebrovascular amyloid deposit.

Ref: Nagele, R. et al. *Neurosci.* **110**, 199 (2002); Garzon-Rodriguez, W. et al. *J. Biol. Chem.* **272**, 21037 (1997).

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4514.1	24224 (0.5 mg) 20276 (1 mg) 20276-5 (5 mg) 20276-25 (25 mg) 20276-100 (100 mg)
ß-Amyloid (1-42) • HCl	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA • HCl	4514.1 • 36.5	21791 (0.5 mg) 21793 (1 mg)
ß-Amyloid (1-42), HFIP treated	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4514.1	64129-05 (0.5 mg) 64129-1 (1 mg)
ß-Amyloid (1-42) • sodium salt	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA • Na salt	4514.1 • 23	60883-01 (0.1 mg) 60883 (1 mg)
[Met]-ß-Amyloid (1-42)	MDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4645.3	64471 (0.5 mg)
Scrambled-ß-Amyloid (1-42)	AIAEGDSHVLKEGAYMEIFDVQGHVFGGKIFRVVDLGSHNVA	4514.1	25382 (0.5 mg) 25383 (1 mg)
Scrambled-ß-Amyloid (1-42), 5-FAM-labeled	5-FAM-AIAEGDSHVLKEGAYMEIFDVQGHVFGGKIFRVVDLGSHNVA, Ex/Em= 494/521 nm	4873.4	60892 (0.1 mg)
ß-Amyloid (42-1)	AIVVGGVMLGIIAGKNSGVDEAFFVLKQHHVEYGSDHRFEAD	4514.1	27276-01 (0.1 mg) 27275 (0.5 mg) 27276 (1 mg)
ß-Amyloid (42-1) • HCl	VVGGVMLGIIAGKNSGVDEAFFVLKQHHVEYGSDHRFEAD	4514.1 • 36.5	60291-01 (0.1 mg) 60291-05 (0.5 mg)
Biotin-ß-Amyloid (1-42)	Biotin-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4772.1	23524-01 (0.1 mg) 23523-05 (0.5 mg)
Biotin-LC-ß-Amyloid (1-42)	Biotin-LC-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4853.6	24641-01 (0.1 mg) 24640 (0.5 mg)

ß-Amyloid (1-42) and Related Peptides (con't)

Product Name	Sequence	MW	Cat# (size)
Aß (1-42)-Lys(Biotin), 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA-K(Biotin), Ex/Em=494/521 nm	5226.9	23599-01 (0.1 mg) 23598 (0.5 mg)
ß-Amyloid (1-42)-Lys(Biotin)-NH_2	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA-K(Biotin)-NH_2	4867.6	61484-01 (0.1 mg) 61484-05 (0.5 mg)
ß-Amyloid (1-42), AMCA-LC-labeled	AMCA-LC-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 354/442 nm	4842.5	60475-01 (0.1 mg)
ß-Amyloid (1-42), 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 494/521 nm	4873.4	23526-01 (0.1 mg) 23525-05 (0.5 mg)
ß-Amyloid (1-42), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 503/528 nm	4870.5	60479-01 (0.1 mg)
ß-Amyloid (1-42), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 551/567 nm	4983.7	60480-01 (0.1 mg)
ß-Amyloid (1-42), Sulforhodamine 101 labeled	Sulforhodamine 101-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 583/601 nm	5102.8	62221 (0.1 mg)
ß-Amyloid (1-42), 5-TAMRA-labeled	5-TAMRA-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 544/572 nm	4926.6	60476-01 (0.1 mg)
Cys-ß-Amyloid (1-42)	CDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4617.3	23537 (0.5 mg) 23538 (1 mg)
[Cys(5-FAM maleimide)]-ß-Amyloid (1-42)	C(5-FAM maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 494/521 nm	5044.7	64421 (0.1 mg)
[Cys(5-TAMRA maleimide)]-Aß (1-42)	C(5-TAMRA maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 544/572 nm	5098.8	64420 (0.1 mg)
[Cys(HiLyte Fluor™ 555 C2 maleimide)]-Aß (1-42)	C(HiLyte Fluor™ 555 C2 maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 551/567 nm	5679.6	64424 (0.1 mg)
[Cys(HiLyte Fluor™ 647 C2 maleimide)]-Aß (1-42)	C(HiLyte Fluor™ 647 C2 maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 649/674 nm	5813.8	64423 (0.1 mg)
[Cys(HiLyte Fluor™ 750 C2 maleimide)]-Aß (1-42)	C(HiLyte Fluor™ 750 C2 maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA, Ex/Em= 750/782 nm	5839.8	64422 (0.1 mg)
[$Asn^{6,13,14}$]-ß-Amyloid (1-42)	DAEFRNDSGYEVNNQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4445.0	61958-01 (0.1 mg)
[Arg^{6}]-ß-Amyloid (1-42), English Mutation	DAEFRRDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4533.2	63323 (0.5 mg)
[Asn^{7}]-ß-Amyloid (1-42), Tottori-Japanese Mutation	DAEFRHNSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4513.1	63324 (0.5 mg)
[Ala^{20}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFAAEDVGSNKGAIIGLMVGGVVIA	4438.0	62446 (0.5 mg)
[Gly^{21}]-ß-Amyloid (1-42), A21G Flemish Mutation	DAEFRHDSGYEVHHQKLVFFGEDVGSNKGAIIGLMVGGVVIA	4500.1	63704 (0.5 mg)
[Gln^{22}]-ß-Amyloid (1-42), E22Q Dutch Mutation	DAEFRHDSGYEVHHQKLVFFAQDVGSNKGAIIGLMVGGVVIA	4513.1	62142 (0.5 mg)
[Gly^{22}]-ß-Amyloid (1-42), Arctic Mutation	DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVVIA	4442.1	61967-05 (0.5 mg)
[Lys^{22}]-ß-Amyloid (1-42), Italian Mutation	DAEFRHDSGYEVHHQKLVFFAKDVGSNKGAIIGLMVGGVVIA	4513.2	62148 (0.5 mg)
[Asn^{23}]-ß-Amyloid (1-42), Iowa Mutation	DAEFRHDSGYEVHHQKLVFFAENVGSNKGAIIGLMVGGVVIA	4513.1	63705 (0.5 mg)
[Cys^{26}]-ß-Amyloid (1-42), S26C-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGCNKGAIIGLMVGGVVIA	4530.2	63672-05 (0.5 mg) 63672-1 (1 mg)
[Pro^{31}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAPIGLMVGGVVIA	4498.1	62443 (0.5 mg)
[Val^{33}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIVLMVGGVVIA	4556.2	62442 (0.5 mg)
[Gly^{35}, Asp^{37}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLGVDGVVIA	4498.0	62832-01 (0.1 mg) 62832-05 (0.5 mg)
[Leu^{35}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLLVGGVVIA	4496.1	62143 (0.5 mg)

ß-Amyloid (1-42) and Related Peptides (con't)

Product Name	Sequence	MW	Cat# (size)
[Leu^{35}]-Met-ß-Amyloid (1-42)	MDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLLVGGVVIA	4627.3	61957-01 (0.1 mg)
[Met(O)^{35}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGL-M(O)-VGGVVIA	4530.1	62478 (0.5 mg)
[Nle^{35}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGL-Nle-VGGVVIA	4496.1	23532-01 (0.1 mg) 23531 (0.5 mg)
[Val^{35}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLVVGGVVIA	4482.1	60556-01 (0.1 mg) 60556-05 (0.5 mg)
[Asp^{37}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVDGVVIA	4572.2	62444 (0.5 mg)
[Leu^{37}]-ß-Amyloid (1-42)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVLGVVIA	4570.2	62829-01 (0.1 mg) 62829-05 (0.5 mg)
ß-Amyloid (2-42)	AEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4399.0	29909-01 (0.1 mg) 29909-1 (1 mg)
ß-Amyloid (3-42)	EFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4327.9	63715-01 (0.1 mg) 63715-1 (1 mg)
[Pyr^{3}]-ß-Amyloid (3-42)	Pyr-FRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4309.9	29907-01 (0.1 mg) 29907-1 (1 mg)
ß-Amyloid (3-42)-Lys(Biotin)-NH_2	EFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA-K(Biotin)-NH_2	4681.4	61959-01 (0.1 mg)
ß-Amyloid (4-42)	FRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4198.8	29908-01 (0.1 mg) 29908-1 (1 mg)
ß-Amyloid (5-42)	RHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4051.6	60087-01 (0.1 mg) 60087-1 (1 mg)
ß-Amyloid (6-42)	HDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	3895.4	60086-01 (0.1 mg) 60086-1 (1 mg)
ß-Amyloid (8-42)	SGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	3643.2	60085-01 (0.1 mg) 60085-1 (1 mg)
ß-Amyloid (9-42)	GYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	3556.2	60084-01 (0.1 mg) 60084-1 (1 mg)
ß-Amyloid (9-42)-Lys(Biotin)-NH_2	GYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA-K(Biotin)-NH_2	3909.7	62462 (0.5 mg)
ß-Amyloid (11-42)	EVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	3335.9	63317 (1 mg)
[Pyr^{11}]-ß-Amyloid (11-42)	Pyr-VHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	3317.9	29903-01 (0.1 mg) 29903-1 (1 mg)
ß-Amyloid (11-42), 5-FAM-labeled	5-FAM-EVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA Ex/Em=494/521 nm	3694.2	63328 (0.1 mg)
ß-Amyloid (11-42), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-EVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA Ex/Em=503/528 nm	3692.3	63327 (0.1 mg)
ß-Amyloid (12-42)	VHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	3206.8	62452 (1 mg)
ß-Amyloid (17-42)	LVFFAEDVGSNKGAIIGLMVGGVVIA	2577.1	22815 (0.5 mg) 22816 (1 mg)
ß-Amyloid (17-42) • HCl	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA • HCl	2577.1 • 36.5	29842 (0.5 mg) 29843 (1 mg)
[Nle^{35}]-ß-Amyloid (17-42)	LVFFAEDVGSNKGAIIGL-Nle-VGGVVIA	2559.1	61076-05 (0.5 mg) 61076-1 (1 mg)
ß-Amyloid (20-42)	FAEDVGSNKGAIIGLMVGGVVIA	2217.6	61989 (1 mg)
ß-Amyloid (22-42)	EDVGSNKGAIIGLMVGGVVIA	1999.4	61972 (1 mg)
ß-Amyloid (23-42)	DVGSNKGAIIGLMVGGVVIA	1870.3	62766 (1 mg)
Biotin-ß-Amyloid (29-42)	BIOTIN-GAIIGLMVGGVVIA	1495.9	61986 (1 mg)
ß-Amyloid (35-42)	MVGGVVIA	745.0	61981 (1 mg)
ß-Amyloid (36-42)	VGGVVIA	613.8	63747 (1 mg)

ß-Amyloid (1-40) and Related Peptides

Aß (1-40) together with Aß (1-42) are two major C-terminal variants of the Aß protein constituting the majority of Aßs. These undergo post-secretory aggregation and deposition in the Alzheimer's diseased brain.

Ref: Masters, CL. et al. *Proc. Natl. Acad. Sci. USA* **82**, 4245 (1985); Yankner, BA. *Neuron* **16**, 921 (1996); Geula, C. et al. *Nat. Med.* **4**, 827 (1998); Shin, R. et al. *J. Neurosci.***17**, 8187 (1997).

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-40)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4329.9	24235 (0.5 mg) 24236 (1 mg) 24236-5 (5 mg) 24236-25 (25 mg) 24236-100 (100 mg)
ß-Amyloid (1-40) • HCl	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV • HCl	4329.9 • 36.5	23211 (0.5 mg) 20698 (1 mg)
ß-Amyloid (1-40), HFIP treated	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4329.9	64128-05 (0.5 mg) 64128-1 (1 mg)
ß-Amyloid (1-40) • Sodium salt	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV • Na salt	4329.9 • 23	64153-1 (1 mg) 64153-5 (5 mg)
[Met]-ß-Amyloid (1-40)	MDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4461.1	64469 (0.5 mg)
Scrambled-ß-Amyloid (1-40)	AEGDSHVLKEGAYMEIFDVQGHVFGGKIFRVVDLGSHNVA	4329.9	24625 (0.5 mg) 24626 (1 mg)
ß-Amyloid (40-1)	VVGGVMLGIIAGKNSGVDEAFFVLKQHHVEYGSDHRFEAD	4329.9	22817 (0.5 mg) 22818 (1 mg)
ß-Amyloid (40-1) • HCl	VVGGVMLGIIAGKNSGVDEAFFVLKQHHVEYGSDHRFEAD • HCl	4329.9 • 36.5	21795 (0.5 mg) 21797 (1 mg)
Biotin-ß-Amyloid (1-40)	Biotin-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4556.2	23512-01 (0.1 mg) 23511-05 (0.5 mg) 23512 (1 mg)
Biotin-LC-ß-Amyloid (1-40)	Biotin-LC-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4669.3	24645-01 (0.1 mg) 24648 (0.5 mg) 24645 (1 mg)
ß-Amyloid (1-40)-Lys(Biotin)-NH_2	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV-K(Biotin)-NH_2	4683.4	61483-01 (0.1 mg) 61483-05 (0.5 mg)
ß-Amyloid (1-40)-Lys(Biotin-LC)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV-K(Biotin-LC)	4797.5	23518-01 (0.1 mg) 23517 (0.5 mg)
ß-Amyloid (1-40)-Lys(Biotin)-NH_2, 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV-K(Biotin)-NH_2, Ex/Em= 494/521 nm	5026.4	23597-01 (0.1 mg) 23596 (0.5 mg)
ß-Amyloid (1-40)-Lys(LC-Biotin), 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV-K(LC-BIOTIN)-NH_2 Ex/Em= 494/521 nm	5154.9	61962-01 (0.1 mg)
ß-Amyloid (1-40), DEAC-labeled	DEAC-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em=432/472nm, DEAC=(7-Diethylaminocoumarin-3-yl)carbonyl	4573.1	61949-01 (0.1 mg)
ß-Amyloid (1-40), AMCA-LC-labeled	AMCA-LC-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 354/442 nm	4676.3	60487-01 (0.1 mg)
ß-Amyloid (1-40), 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 494/521 nm	4688.2	23514-01 (0.1 mg) 23513-05 (0.5 mg)
ß-Amyloid (1-40), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 503/528 nm	4686.3	60491-01 (0.1 mg)
ß-Amyloid (1-40), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 551/567 nm	5199.0	60492-01 (0.1 mg)
ß-Amyloid (1-40), HiLyte Fluor™ TR-labeled	HiLyte Fluor™ TR-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 584/607 nm	4892.6	60490-01 (0.1 mg)
ß-Amyloid (1-40), Sulfo-rhodamine 101-labeled	Sulforhodamine 101-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em= 583/601 nm	4946.6	60489 (0.1 mg)
ß-Amyloid (1-40), Rhodamine Green-labeled	Rhodamine Green-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 502/527 nm	4686.2	61134 (0.1 mg)

ß-Amyloid (1-40) and Related Peptides (con't)

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-40), 5-TAMRA-labeled	5-TAMRA-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 544/572 nm	4742.4	60488-01 (0.1 mg)
ß-Amyloid (1-40), BPE-labeled	B-Phycoerythrin-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em= 545/575 nm	~244k	60496 (0.1 mg)
Cys-ß-Amyloid (1-40)	C-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4433.0	23519 (0.5 mg) 23520 (1 mg)
ß-Amyloid (1-40)-Cys	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV-C	4433.0	62233 (0.1 mg)
[Cys(5-FAM maleimide)]-ß-Amyloid (1-40)	C(5-FAM maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em= 494/521 nm	4860.4	64418 (0.1 mg)
[Cys(5-TAMRA maleimide)]-ß-Amyloid (1-40)	C(5-TAMRA maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em= 544/572 nm	4914.5	64419 (0.1 mg)
[Cys(HiLyte Fluor™ 555 C2 maleimide)]-ß-Amyloid (1-40)	C(HiLyte Fluor™ 555 C2 maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em= 551/567 nm	5495.3	64415 (0.1 mg)
[Cys(HiLyte Fluor™ 647 C2 maleimide)]-ß-Amyloid (1-40)	C(HiLyte Fluor™ 647 C2 maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em= 649/674 nm	5629.5	64416 (0.1 mg)
[Cys(HiLyte Fluor™ 750 C2 maleimide)]-ß-Amyloid (1-40)	C(HiLyte Fluor™ 750 C2 maleimide)-DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV, Ex/Em= 750/782 nm	5655.5	64417 (0.1 mg)
[Trp^{4}]-ß-Amyloid (1-40),	DAEWRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4368.9	64073-05 (0.5 mg) 64073-1 (1 mg)
[Arg^{6}]-ß-Amyloid (1-40), English Mutation	DAEFRRDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4348.9	63321 (0.5 mg)
[Asn^{7}]-ß-Amyloid (1-40), Tottori-Japanese Mutation	DAEFRHNSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4328.9	63320 (0.5 mg)
[Cys^{7}]-ß-Amyloid (1-40)	DAEFRHCSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4317.9	62815-05 (0.5 mg) 62815-1 (1 mg)
[Gln^{9}]-ß-Amyloid (1-40)	DAEFRHDSQYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4401.0	61948-05 (0.5 mg)
[Gln^{11}]-ß-Amyloid (1-40)	DAEFRHDSGYQVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4328.9	24237 (0.5 mg) 24238 (1 mg)
[Cys^{20}]-ß-Amyloid (1-40)	DAEFRHDSGYEVHHQKLVFCAEDVGSNKGAIIGLMVGGVV	4285.8	63895 (0.5 mg)
[Gly^{21}]-ß-Amyloid (1-40), Flemish Mutation	DAEFRHDSGYEVHHQKLVFFGEDVGSNKGAIIGLMVGGVV	4315.9	62150 (0.5 mg)
[Gln^{22}]-ß-Amyloid (1-40), Dutch Mutation	DAEFRHDSGYEVHHQKLVFFAQDVGSNKGAIIGLMVGGVV	4328.9	61261 (0.5 mg)
[Gly^{22}]-ß-Amyloid (1-40), Arctic Mutation	DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVV	4257.8	61262 (0.5 mg)
[Lys^{22}]-ß-Amyloid (1-40), Italian Mutation	DAEFRHDSGYEVHHQKLVFFAKDVGSNKGAIIGLMVGGVV	4328.9	62147 (0.5 mg)
[Gln^{22}, Asn^{23}]-ß-Amyloid (1-40), Dutch/Iowa Double Mutation	DAEFRHDSGYEVHHQKLVFFAQNVGSNKGAIIGLMVGGVV	4327.9	62146 (0.5 mg)
[Asn^{23}]-ß-Amyloid (1-40), Iowa Mutation	DAEFRHDSGYEVHHQKLVFFAENVGSNKGAIIGLMVGGVV	4328.9	62145 (0.5 mg)
[Ala^{28}]-ß-Amyloid (1-40)	DAEFRHDSGYEVHHQALVFFAEDVGSNAGAIIGLMVGGVV	4215.7	61968-05 (0.5 mg)
[Cys^{26}]-ß-Amyloid (1-40), S26C-ß-Amyloid (1-40)	DAEFRHDSGYEVHHQKLVFFAEDVGCNKGAIIGLMVGGVV	4345.9	63671-05 (0.5 mg) 63671-1 (1 mg)
[Cys^{26}]-ß-Amyloid (1-40), S26C-ß-Amyloid (1-40) Dimer	DAEFRHDSGYEVHHQKLVFFAEDVGCNKGAIIGLMVGGVV | DAEFRHDSGYEVHHQKLVFFAEDVGCNKGAIIGLMVGGVV	8690.8	64130-05 (0.5 mg) 64130-1 (1 mg)

ß-Amyloid (1-40) and Related Peptides (con't)

Product Name	Sequence	MW	Cat# (size)
[Leu^{33}]-ß-Amyloid (1-40)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIILLMVGGVV	4386.0	62830-01 (0.1 mg) 62830-05 (0.5 mg)
[Nle^{35}]-ß-Amyloid (1-40)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGL-Nle-VGGVV	4311.8	23521 (0.5 mg) 23522 (1 mg)
ß-Amyloid (2-40)	AEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4214.8	29905-01 (0.1 mg) 29905-1 (1 mg)
ß-Amyloid (3-40)	EFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4143.7	61029 (0.1 mg) 61029-1 (1 mg)
[Pyr^{3}]-ß-Amyloid (3-40)	Pyr-FRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4125.7	29906-01 (0.1 mg) 29906-1 (1 mg)
ß-Amyloid (4-40)	FRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	4014.6	29902-01 (0.1 mg) 29902-1 (1 mg)
ß-Amyloid (5-40)	RHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	3867.4	62964 (1 mg)
[Gln^{22}]-ß-Amyloid (6-40)	HDSGYEVHHQKLVFFAQDVGSNKGAIIGLMVGGVV	3710.2	25358 (0.5 mg) 25359 (1 mg)
ß-Amyloid (8-40)	SGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	3459.0	61975 (1 mg)
ß-Amyloid (11-40)	EVHHQKLVFFAEDVGSNKGAIIGLMVGGVV	3151.7	60017-01 (0.1 mg) 60017-1 (1 mg)
ß-Amyloid (11-40), 5-FAM-labeled	5-FAM-EVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em=494/521 nm	3510.0	62950 (0.1 mg)
ß-Amyloid (11-40), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-EVHHQKLVFFAEDVGSNKGAIIGLMVGGVV Ex/Em=503/528 nm	3508.1	62951 (0.1 mg)
ß-Amyloid (11-40)- Lys(Biotin)-NH_2	EVHHQKLVFFAEDVGSNKGAIIGLMVGGVV-K(Biotin)-NH_2	3505.2	62471 (0.5 mg)
[Pyr^{11}]-ß-Amyloid (11-40)	Pyr-VHHQKLVFFAEDVGSNKGAIIGLMVGGVV	3133.7	29904-01 (0.1 mg) 29904-1 (1 mg)
ß-Amyloid (13-40)	HHQKLVFFAEDVGSNKGAIIGLMVGGVV	2923.4	62962 (1 mg)
ß-Amyloid (17-40)	LVFFAEDVGSNKGAIIGLMVGGVV	2392.9	22813 (0.5 mg) 22814 (1 mg)
Biotin-ß-Amyloid (17-40)	Biotin-LVFFAEDVGSNKGAIIGLMVGGVV	2619.2	23541-01 (0.1 mg) 23540 (0.5 mg) 23541 (1 mg)
Biotin-LC-ß-Amyloid (17-40)	Biotin-LC-LVFFAEDVGSNKGAIIGLMVGGVV	2732.3	23543-01 (0.1 mg) 24642 (0.5 mg) 23543 (1 mg)
ß-Amyloid (17-40)- KKKK(Biotin)-NH_2	LVFFAEDVGSNKGAIIGLMVGGVVKKK-K(Biotin)-NH_2	3130.9	62975 (0.1 mg)
[Cys^{26}]-ß-Amyloid (17-40), S26C-ß-Amyloid (17-40)	LVFFAEDVGCNKGAIIGLMVGGVV	2408.9	63866 (1 mg)
ß-Amyloid (22-40)	EDVGSNKGAIIGLMVGGVV	1815.1	62453 (1 mg)
ß-Amyloid (22-40)-NH_2	EDVGSNKGAIIGLMVGGVV-NH_2	1814.1	62454 (1 mg)
ß-Amyloid (26-40)	SNKGAIIGLMVGGVV	1414.7	61985 (1 mg)
Biotin-ß-Amyloid (29-40)	Biotin-GAIIGLMVGGVV	1311.7	62449 (1 mg)
ß-Amyloid (29-40)	GAIIGLMVGGVV	1085.4	60238-1 (1 mg) 60238-5 (5 mg)
ß-Amyloid (33-40)	GLMVGGVV	730.9	61982 (1 mg)
ß-Amyloid (1-40) Binding Peptide, 5-FAM-labeled	5-FAM-DWGKGGRWRLWPGASGKTEA Ex/Em=494/521 nm	2573.8	62943 (0.1 mg)

ß-Amyloid (1-28) and Related Peptides

The three-dimensional solution structure of Aß (1-28) reveals the folding of the peptide to form a predominantly α-helical structure with a bend centered at residue 12 and the side chains of histidine-13 and lysine-16 in close proximity, residing on the same face of the helix. Their proximity may constitute a binding motif with the heparan sulfate proteoglycans. Aß (1-28) is highly hydrophilic and shares sequences with bA4, the major component of Aß. Its assembly is fibrillar, i.e., elongated in a single direction.

Ref: Kirshenbaum K. and V. Daggett, *Biochem.* **34**, 7640 (1995); Talafous, J. et al. *Biochem.* **33**, 7788 (1994).

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-28)	DAEFRHDSGYEVHHQKLVFFAEDVGSNK	3262.5	24231 (0.5 mg) 24232 (1 mg)
[Met]-ß-Amyloid (1-28)	MDAEFRHDSGYEVHHQKLVFFAEDVGSNK	3393.7	64465 (0.5 mg)
Bromoacetyl-ß-Amyloid (1-28)	Bromoacetyl-DAEFRHDSGYEVHHQKLVFFAEDVGSNK	3383.5	62441 (1 mg)
Biotin-ß-Amyloid (1-28)	Biotin-DAEFRHDSGYEVHHQKLVFFAEDVGSNK	3488.8	60459 (0.1 mg)
ß-Amyloid (1-28)-Lys(Biotin)	DAEFRHDSGYEVHHQKLVFFAEDVGSNK-K(Biotin)	3617.0	61260 (0.1 mg)
ß-Amyloid (1-28)-Lys(Biotin)-NH_2	DAEFRHDSGYEVHHQKLVFFAEDVGSNK-K(Biotin)-NH_2	3616.0	62465 (0.5 mg)
ß-Amyloid (1-28), AMCA-labeled	AMCA-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 354/442 nm	3477.5	60460 (0.1 mg)
ß-Amyloid (1-28), 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 494/521 nm	3675.0	60759-01 (0.1 mg) 60759 (0.5 mg)
ß-Amyloid (1-28), HiLyte Fluor™ 488-labeled	HiLyte Fluor™488-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 503/528 nm	3620.9	60466-01 (0.1 mg)
ß-Amyloid (1-28)-Lys(HiLyte Fluor™ 488)	DAEFRHDSGYEVHHQKLVFFAEDVGSNK-K(HiLyte Fluor™ 488) Ex/Em= 503/528 nm	3747.0	60982 (0.1 mg)
ß-Amyloid (1-28), 5-TAMRA-labeled	5-TAMRA-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 544/572 nm	3675.0	60461-01 (0.1 mg)
ß-Amyloid (1-28), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 551/567 nm	4131.6	60468-01 (0.1 mg)
ß-Amyloid (1-28), HiLyte Fluor™ TR-labeled	HiLyte Fluor™ TR-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 584/607 nm	3807.2	60464-01 (0.1 mg)
ß-Amyloid (1-28)-Lys(HiLyte Fluor™ TR)	DAEFRHDSGYEVHHQKLVFFAEDVGSNK-K(HiLyte Fluor™ TR) Ex/Em= 584/607 nm	3391.7	60745 (0.1 mg)
ß-Amyloid (1-28), HiLyte Fluor™ 647-labeled	HiLyte Fluor™ 647-DAEFRHDSGYEVHHQKLVFFAEDVGSNK Ex/Em= 649/674 nm	4265.8	60469 (0.1 mg)
[Gln^{11}]-ß-Amyloid (1-28)	DAEFRHDSGYQVHHQKLVFFAEDVGSNK	3261.5	22821 (0.5 mg) 22822 (1 mg)
[$Ala^{16,17,20}$]-ß-Amyloid (1-28)	DAEFRHDSGYEVHHQAAVFAAEDVGSNK	3087.2	62890 (1 mg)
ß-Amyloid (8-28)	SGYEVHHQKLVFFAEDVGSNK	2391.6	62887 (1 mg)
ß-Amyloid (11-28)-Lys(Biotin)-NH_2	EVHHQKLVFFAEDVGSNK-K(Biotin)-NH_2	2437.8	62472 (0.5 mg)
ß-Amyloid (12-28)	VHHQKLVFFAEDVGSNK	1955.2	24229 (0.5 mg) 24230 (1 mg)
Cys-ß-Amyloid (12-28)	CVHHQKLVFFAEDVGSNK	2058.3	23548-01 (0.1 mg) 23547 (0.5 mg) 23548 (1 mg)
ß-Amyloid (12-28)-Cys	VHHQKLVFFAEDVGSNKC	2058.3	23550-01 (0.1 mg) 23549 (0.5 mg) 23550 (1 mg)
ß-Amyloid (17-28)	LVFFAEDVGSNK	1325.5	62447 (1 mg)
ß-Amyloid (17-28)-Lys(Biotin)	LVFFAEDVGSNK-K(Biotin)	1680.0	62466 (0.5 mg)
ß-Amyloid (18-28)	VFFAEDVGSNK	1212.3	61133 (1 mg)
Biotin-ß-Amyloid (18-28)	Biotin-VFFAEDVGSNK	1438.6	62448 (1 mg)
Biotin-LC-ß-Amyloid (18-28)	Biotin-LC-VFFAEDVGSNK	1551.8	62971 (1 mg)

ß-Amyloid Peptide Fragments

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-5)-Cys	DAEFRC	739.8	64352 (1 mg)
ß-Amyloid (1-8)-Cys	DAEFRHDSC	1079.1	62132 (1 mg)
ß-Amyloid (1-9)	DAEFRHDSG	1033.0	61970 (1 mg)
ß-Amyloid (1-9), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-DAEFRHDSG Ex/Em = 551/567 nm	1501.6	63311 (0.1 mg)
ß-Amyloid (1-9)-A-NH_2	DAEFRHDSGA-NH_2	1103.1	62131 (1 mg)
ß-Amyloid (1-9)-GG	DAEFRHDSG-GG	1147.1	62138 (1 mg)
ß-Amyloid (1-9)-GGC	DAEFRHDSG-GGC	1250.3	64350 (1 mg)
ß-Amyloid (1-9)-K(Biotin-LC)	DAEFRHDSG-K(Biotin-LC)-NH_2	1499.7	61973 (1 mg)
ß-Amyloid (1-10)	DAEFRHDSGY	1196.2	64478 (1 mg)
ß-Amyloid (1-10)-Cys	DAEFRHDSGYC	1299.4	62144 (1 mg)
ß-Amyloid (1-10)-GG-K(Biotin)	DAEFRHDSGYGG-K(Biotin)	1664.8	62134 (1 mg)
ß-Amyloid (1-10)-K(Biotin)	DAEFRHDSGY-K(Biotin)	1550.7	62135 (1 mg)
ß-Amyloid (1-10)-KK	DAEFRHDSGYKK	1452.6	62137 (1 mg)
ß-Amyloid (1-11)	DAEFRHDSGYE	1325.3	22819 (1 mg) 22820 (5 mg)
ß-Amyloid (1-11), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-DAEFRHDSGYE Ex/Em=503/528 nm	1681.7	63331 (0.1 mg)
ß-Amyloid (1-11), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-DAEFRHDSGYE Ex/Em = 551/567 nm	1793.9	63334 (0.1 mg)
Cys-ß-Amyloid (1-11)	C-DAEFRHDSGYE	1428.5	64351 (1 mg)
ß-Amyloid (1-12)	DAEFRHDSGYEV	1424.5	62967 (1 mg)
Cys-ß-Amyloid (1-12)	C-DAEFRHDSGYEV	1527.6	64353 (1 mg)
ß-Amyloid (1-12)-Cys-NH_2	DAEFRHDSGYEVC-NH_2	1526.6	63333 (1 mg)
ß-Amyloid (1-12)-K(Biotin)-NH_2	DAEFRHDSGYEV-K(Biotin)-NH_2	1778.0	62973 (1 mg)
ß-Amyloid (1-13)	DAEFRHDSGYEVH	1561.6	64480 (1 mg)
ß-Amyloid (1-14)	DAEFRHDSGYEVHH	1698.7	64484 (1 mg)
ß-Amyloid (1-15)	DAEFRHDSGYEVHHQ	1826.9	61798 (1 mg)
Biotin-ß-Amyloid (1-15)	Biotin-DAEFRHDSGYEVHHQ	2053.2	62461 (1 mg)
Biotin-LC-ß-Amyloid (1-15)	Biotin-LC-DAEFRHDSGYEVHHQ	2166.4	62970 (1 mg)
ß-Amyloid (1-16)	DAEFRHDSGYEVHHQK	1955.0	24225 (1 mg) 24226 (5 mg)
ß-Amyloid (1-16)-Cys	DAEFRHDSGYEVHHQ-C	2058.2	63746 (1 mg)
Biotin-ß-Amyloid (1-16)	Biotin-DAEFRHDSGYEVHHQK	2181.3	62457 (1 mg)
Biotin-LC-ß-Amyloid (1-16)	Biotin-LC-DAEFRHDSGYEVHHQK	2294.5	62458 (1 mg)
ß-Amyloid (1-16)-K(Biotin-LC)	DAEFRHDSGYEVHHQK-K(Biotin-LC)-NH_2	2421.7	62136 (1 mg)
ß-Amyloid (1-16)- K(HiLyte Fluor™ 488)	DAEFRHDSGYEVHHQ-K(HiLyte Fluor™ 488) Ex/Em= 503/528 nm	2311.4	62002-05 (0.5 mg)
Aß (1-16)-8 branched MAPS	DAEFRHDSGYEVHHQK-on 8 branched MAPS	16482.4	62474 (1 mg)
[Gln^{11}]-ß-Amyloid (1-16)	DAEFRHDSGYQVHHQK	1954.1	25368 (0.5 mg) 25369 (1 mg)
ß-Amyloid (1-16), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-DAEFRHDSGYEVHHQK Ex/Em=503/528 nm	2311.4	63332 (0.1 mg)
ß-Amyloid (1-16), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-DAEFRHDSGYEVHHQK Ex/Em = 551/567 nm	2423.6	63330 (0.1 mg)
ß-Amyloid (1-17)	DAEFRHDSGYEVHHQKL	2068.2	61955 (1 mg)
ß-Amyloid (1-17)-Cys	DAEFRHDSGYEVHHQKLC	2171.3	62473 (1 mg)

ß-Amyloid Peptide Fragments

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-17), 5-FAM-labeled	5-FAM-DAEFRHDSGYEVHHQKL, Ex/Em = 494/521 nm	2426.5	62952 (0.1 mg)
ß-Amyloid (1-17), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-DAEFRHDSGYEVHHQKL Ex/Em = 503/528 nm	2424.6	62953 (0.1 mg)
ß-Amyloid (1-20)	DAEFRHDSGYEVHHQKLVFF	2461.7	62456 (1 mg)
ß-Amyloid (1-22)	DAEFRHDSGYEVHHQKLVFFAE	2661.9	62966 (1 mg)
ß-Amyloid (1-23)-Gly	DAEFRHDSGYEVHHQKLVFFAEDG	2834.0	62141 (1 mg)
ß-Amyloid (1-24)-Cys	DAEFRHDSGYEVHHQKLVFFAEDVC	2979.3	62475 (1 mg)
ß-Amyloid (1-28)	*See large section of ß-Amyloid (1-28) and Related Peptides on p. 8*		
ß-Amyloid (1-33)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIG	3674.0	60250-05 (0.5 mg) 60250-1 (1 mg)
ß-Amyloid (1-33)-Ala	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGA	3745.1	62140 (1 mg)
ß-Amyloid (1-34)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGL	3787.2	61799 (0.5 mg)
ß-Amyloid (1-36)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMV	4017.5	60252-05 (0.5 mg) 60252-1 (1 mg)
[Leu^{32}]-ß-Amyloid (1-36)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAILGLMV	4017.5	63748 (0.5 mg)
ß-Amyloid (1-37)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVG	4074.6	60251-05 (0.5 mg) 60251-1 (1 mg)
ß-Amyloid (1-38)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGG	4131.6	24233 (0.5 mg) 24234 (1 mg)
[Met]-ß-Amyloid (1-38)	MDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGG	4262.8	64467 (0.5 mg)
ß-Amyloid (1-39)	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGV	4230.7	24295 (0.5 mg) 24296 (1 mg)
ß-Amyloid (1-40) and (1-42)	*See large sections of ß-Amyloid (1-42)* & (1-40) *and Related Peptides on p. 2-7*		
ß-Amyloid (2-17)	AEFRHDSGYEVHHQKL	1953.1	64483 (1 mg)
ß-Amyloid (3-17)	EFRHDSGYEVHHQKL	1882.0	64482 (1 mg)
ß-Amyloid (4-10)	FRHDSGY	880.9	60226-1 (1 mg) 60226-5 (5 mg)
Cys-ß-Amyloid (4-10)	CFRHDSGY	984.1	61979 (1 mg)
ß-Amyloid (4-13)	FRHDSGYEVH	1246.3	62954 (1 mg)
ß-Amyloid (4-17)	FRHDSGYEVHHQKL	1752.9	64475 (1 mg)
ß-Amyloid (4-24)	FRHDSGYEVHHQKLVFFAEDV	2560.8	62961 (1 mg)
ß-Amyloid (4-24)-Cys	FRHDSGYEVHHQKLVFFAEDV-C	2664.0	63326 (1 mg)
ß-Amyloid (4-42)-K(LC-Biotin)	FRHDSGYEVHH-K(LC-Biotin)-NH_2	1850.2	64223 (1 mg)
ß-Amyloid (5-14)	RHDSGYEVHH	1236.3	62965 (1 mg)
ß-Amyloid (5-17)	RHDSGYEVHHQKL	1605.7	64481 (1 mg)
ß-Amyloid (6-17)	HDSGYEVHHQKL	1449.6	64479 (1 mg)
ß-Amyloid (6-30)	HDSGYEVHHQKLVFFAEDVGSNKGA	2772.0	62888 (1 mg)
ß-Amyloid (7-22)	DSGYEVHHQKLVFFAE	1906.1	61803 (1 mg)
ß-Amyloid (7-29)	DSGYEVHHQKLVFFAEDVGSNKG	2563.8	62889 (1 mg)
ß-Amyloid (8-17)	SGYEVHHQKL	1197.3	64477 (1 mg)
ß-Amyloid (8-38)	SGYEVHHQKLVFFAEDVGSNKGAIIGLMVGG	3260.7	61879 (1 mg)
ß-Amyloid (9-27)	GYEVHHQKLVFFAEDVGSN	2176.4	62886 (1 mg)
ß-Amyloid (10-19)	YEVHHQKLVF	1299.5	62963 (1 mg)
ß-Amyloid (10-20)	YEVHHQKLVFF	1446.7	25364 (0.5 mg) 25365 (1 mg)
Biotin-LC-ß-Amyloid (10-20)	Biotin-LC-YEVHHQKLVFF	1786.2	62972 (1 mg)

ß-Amyloid Peptide Fragments (con't)

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (10-26)	YEVHHQKLVFFAEDVGS	2005.2	62885 (1 mg)
ß-Amyloid (10-35)	YEVHHQKLVFFAEDVGSNKGAIIGLM	2903.4	61931 (1 mg)
ß-Amyloid (10-35)-Lys(Biotin)-NH2	YEVHHQKLVFFAEDVGSNKGAIIGLM-K(Biotin)-NH_2	3256.9	63745 (0.1 mg)
ß-Amyloid (10-35), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-YEVHHQKLVFFAEDVGSNKGAIIGLM Ex/Em = 503/528 nm	3259.8	63306 (0.1 mg)
ß-Amyloid (10-35), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-YEVHHQKLVFFAEDVGSNKGAIIGLM Ex/Em = 551/567 nm	3372.0	63307 (0.1 mg)
ß-Amyloid (11-17)	EVHHQKL	890.0	63819 (1 mg)
ß-Amyloid (11-22)	EVHHQKLVFFAE	1483.7	23956 (1 mg) 23957 (5 mg)
DABCYL-ß-Amyloid (11-22)-EDANS	DABCYL-EVHHQKLVFFAE-EDANS, Ex/Em = 340/490 nm upon cleavage	1983.0	23551-025 (0.25 mg) 23551 (1 mg)
ß-Amyloid (11-25)	EVHHQKLVFFAEDVG	1755.0	62884 (1 mg)
ß-Amyloid (12-20)	VHHQKLVFF	1154.4	61102 (1 mg)
ß-Amyloid (12-22)	VHHQKLVFFAE	1354.6	62939 (1 mg)
ß-Amyloid (12-24)	VHHQKLVFFAEDV	1568.8	62883 (1 mg)
ß-Amyloid (13-22)	HHQKLVFFAE	1255.5	62894 (1 mg)
ß-Amyloid (13-23)	HHQKLVFFAED	1370.5	62882 (1 mg)
ß-Amyloid (13-28)	HHQKLVFFAEDVGSNK	1856.1	61802 (1 mg)
ß-Amyloid (13-29)-Gly-Cys	HHQKLVFFAEDVGSNKGGC	2073.3	61800 (1 mg)
ß-Amyloid (14-21)	HQKLVFFA	989.2	62893 (1 mg)
ß-Amyloid (14-22)	HQKLVFFAE	1118.3	62881 (1 mg)
ß-Amyloid (14-23)	HQKLVFFAED	1233.4	62024 (1 mg)
[Gln^{22}]-ß-Amyloid (14-23)	HQKLVFFAQD	1232.4	62891 (1 mg)
ß-Amyloid (14-25)	HQKLVFFAEDVG	1389.6	62760 (1 mg)
Ac-ß-Amyloid (15-20)	Ac-QKLVFF	823.0	60227-1 (1 mg) 60227-5 (5 mg)
ß-Amyloid (15-21)	QKLVFFA	852.0	60228-1 (1 mg) 60228-5 (5 mg)
ß-Amyloid (15-23)	QKLVFFAED	1096.3	62880 (1 mg)
[Gln^{22}]-ß-Amyloid (15-23)	QKLVFFAQD	1095.3	62892 (1 mg)
ß-Amyloid (15-25)	QKLVFFAEDVG	1252.4	62906 (1 mg)
Biotin-LC-ß-Amyloid (15-25)	Biotin-LC-QKLVFFAEDVG	1591.9	62907 (1 mg)
ß-Amyloid (15-26)-Lys(Biotin)-NH_2	QKLVFFAEDVGS-K(Biotin)-NH_2	1693.0	62469 (0.5 mg)
ß-Amyloid (15-36)	QKLVFFAEDVGSNKGAIIGLMV	2336.8	62023 (1 mg)
ß-Amyloid (16-20)	KLVFF	652.8	60229-1 (1 mg) 60229-5 (5 mg)
ß-Amyloid (16-20), all d-isomers	klvff	652.8	61343 (1 mg)
Ac-K(Me)^{16}, N-Me-V^{18}-ß-Amyloid (16-20)-NH_2	Ac-K(Me)-L-(N-Me-V)-FF-NH_2	721.9	61344 (1 mg)
ß-Amyloid (16-20), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-KLVFF Ex/Em = 503/528 nm	1009.2	63304 (1 mg)
ß-Amyloid (16-20), HiLyte Fluor™ 555-labeled	HiLyte Fluor™ 555-KLVFF Ex/Em = 551/567 nm	1121.4	63305 (1 mg)
ß-Amyloid (16-22)	KLVFFAE	853.0	62897 (1 mg)
ß-Amyloid (16-23)	KLVFFAED	968.1	61801 (1 mg)
ß-Amyloid (16-24)	KLVFFAEDV	1067.3	62139 (1 mg)
ß-Amyloid (16-26)	KLVFFAEDVGS	1211.4	61804 (1 mg)

ß-Amyloid Peptide Fragments (con't)

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (17-21)	LVFFA	595.7	60230-1 (1 mg) 60230-5 (5 mg)
ß-Amyloid (17-21)-K(Biotin)	LVFFA-K(Biotin)	950.2	62467 (1 mg)
[Pro^{18}, Asp^{21}]-ß-Amyloid (17-21)	LPFFD	637.7	60618 (1 mg)
Ac-[Pro^{18}, Asp^{21}]- ß-Amyloid (17-21)-NH_2, iAb5p	Ac-LPFFD-NH_2	678.8	61174 (1 mg)
Ac-[Pro^{18}, N-Me Phe^{19}]-ß-Amyloid (17-21)-NH_2, iAb5p-A1	Ac-LP-(NMe-F)-FD-NH_2	692.8	60620 (1 mg)
ß-Amyloid (17-24)	LVFFAEDV	939.1	61978 (1 mg)
Biotin-ß-Amyloid (17-24)	Biotin-LVFFAEDV	1165.4	61980 (1 mg)
Ac-ß-Amyloid (20-29)-NH_2	Ac-FAEDVGSNKG-NH_2	1064.1	60231-1 (1 mg) 60231-5 (5 mg)
ß-Amyloid (22-35)	EDVGSNKGAIIGLM	1403.6	22823 (1 mg) 22824 (5 mg)
Biotin-LC-ß-Amyloid (22-41)	Biotin-LC-EDVGSNKGAIIGLMVGGVVI	2267.8	62455 (1 mg)
ß-Amyloid (23-37)	DVGSNKGAIIGLMVG	1430.7	62761 (1 mg)
[Ile^{34}]-ß-Amyloid (25-34)	GSNKGAIIGI	929.1	61077-1 (1 mg) 61077-5 (5 mg)
ß-Amyloid (25-35)	GSNKGAIIGLM	1060.3	24227 (1 mg) 24228 (5 mg)
ß-Amyloid (25-35) • HCl	GSNKGAIIGLM • HCl	1060.3 • 36.5	21647 (1 mg) 23212 (5 mg)
ß-Amyloid (25-35), scrambled	MAKGINGISGL	1060.3	61971 (1 mg)
ß-Amyloid (35-25), or ß-Amyloid (25-35) reversed	MLGIIAGKNSG	1060.3	25366 (0.5 mg) 25367 (1 mg)
Biotin-ß-Amyloid (25-35)	Biotin-GSNKGAIIGLM	1286.6	62451 (1 mg)
ß-Amyloid (25-35), HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-GSNKGAIIGLM Ex/Em = 503/528 nm	1416.7	63308 (0.1 mg)
Cys-ß-Amyloid (25-35)	C-GSNKGAIIGLM	1163.4	63869 (1 mg)
[Phe^{34}]-ß-Amyloid (25-35)	GSNKGAIIGFM	1094.3	61984 (1 mg)
[Nle^{35}]-ß-Amyloid (25-35)	GSNKGAIIGL-Nle	1042.3	22976 (1 mg) 22977 (5 mg)
ß-Amyloid (26-37)	SNKGAIIGLMVG	1159.4	62920 (1 mg)
ß-Amyloid (26-38)	SNKGAIIGLMVGG	1216.5	62919 (1 mg)
ß-Amyloid (26-39)	SNKGAIIGLMVGGV	1315.6	62916 (1 mg)
ß-Amyloid (29-37)	GAIIGLMVG	830.1	62924 (1 mg)
ß-Amyloid (29-38)	GAIIGLMVGG	887.1	62923 (1 mg)
ß-Amyloid (29-39)	GAIIGLMVGGV	986.3	62921 (1 mg)
ß-Amyloid (30-34)	AIIGL	485.6	61977 (1 mg)
ß-Amyloid (31-35)	IIGLM	545.7	25360 (1 mg) 25361 (5 mg)
Propionyl-ß-Amyloid (31-34)-NH_2	Propionyl-IIGL-NH_2	469.6	60232-1 (1 mg) 60232-5 (5 mg)
ß-Amyloid (32-35)	IGLM	432.6	25362 (1 mg) 25363 (5 mg)
ß-Amyloid (35-43)	MVGGVVIAT	846.1	62759 (1 mg)
ß-Amyloid (36-44)	VGGVVIATV	814.0	63749 (1 mg)
ß-Amyloid (36-45)	VGGVVIATVI	927.2	63750 (1 mg)
ß-Amyloid (36-46)	VGGVVIATVIV	1026.3	63751 (1 mg)
ß-Amyloid (37-43)	GGVVIAT	615.7	61030 (1 mg)

ß-Amyloid Peptides - Mouse/Rat

ß-Amyloid (1-55), human DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITLVMLKKK

ß-Amyloid (1-55), mouse/rat DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITLVMLKKK

5 10 15 20 25 30 35 40 45 50 55

Product Name	Sequence	MW	Cat# (size)
ß-Amyloid (1-10), mouse/rat	DAEFGHDSGF	1081.1	62969 (1 mg)
ß-Amyloid (1-13), mouse/rat	DAEFGHDSGFEVR	1465.5	62978 (1 mg)
ß-Amyloid (1-14), mouse/rat	DAEFGHDSGFEVRH	1602.6	60890-1 (1 mg) 60890-5 (5 mg)
ß-Amyloid (1-16)-NH_2, mouse/rat	DAEFGHDSGFEVRHQK-NH_2	1858.0	60889-1 (1 mg) 60889-5 (5 mg)
ß-Amyloid (1-17), mouse/rat	DAEFGHDSGFEVRHQKL	1972.1	62977 (1 mg)
ß-Amyloid (1-28), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNK	3166.4	62995 (1 mg)
[Met]-ß-Amyloid (1-28), mouse/rat	MDAEFGHDSGFEVRHQKLVFFAEDVGSNK	3297.6	64466 (0.5 mg)
ß-Amyloid (1-34), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGL	3691.1	62998 (1 mg)
ß-Amyloid (1-38), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGG	4035.5	62476 (1 mg)
[Met]-ß-Amyloid (1-38), mouse/rat	MDAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGG	4166.7	64468 (0.5 mg)
ß-Amyloid (1-39), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGV	4134.7	63000 (0.5 mg)
ß-Amyloid (1-40), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVV	4233.8	25380 (0.5 mg) 25230 (1 mg)
[Met]-Aß (1-40), mouse/rat	MDAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVV	4365.0	64470 (0.5 mg)
Biotin-LC-ß-Amyloid (1-40), mouse/rat	Biotin-LC-DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVV	4573.3	61717-01 (0.1 mg) 61717-05 (0.5 mg) 61717-1 (1 mg)
ß-Amyloid (1-40)-K(Biotin)-NH_2, mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVV-K(Biotin)-NH_2	4587.3	63356 (0.1 mg)
ß-Amyloid (1-42), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4418.0	25381 (0.5 mg) 25231 (1 mg)
ß-Amyloid (1-42), mouse/rat, HiLyte Fluor™ 488-labeled	HiLyte Fluor™ 488-DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMV GGVVIA, Ex/Em = 503/528 nm	4774.4	64572 (0.1 mg)
[Met]-ß-Amyloid (1-42), mouse/rat	MDAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4549.2	64472 (0.5 mg)
Biotin-LC-ß-Amyloid (1-42), mouse/rat	Biotin-LC-DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIA	4757.5	61718-01 (0.1 mg) 61718-05 (0.5 mg)
ß-Amyloid (1-43), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIAT	4519.1	62479 (1 mg)
ß-Amyloid (1-45), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVI	4731.4	62991 (0.1 mg)
ß-Amyloid (1-46), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIV	4830.6	62992 (0.1 mg)
ß-Amyloid (1-47), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVI	4943.7	62993 (0.1 mg)
ß-Amyloid (1-48), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVIT	5044.8	62994 (0.1 mg)
ß-Amyloid (1-49), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITL	5158.0	62979 (0.1 mg)
ß-Amyloid (1-55), mouse/rat	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIATVIVITLVM LKKK	5886.0	63354 (0.1 mg)
ß-Amyloid (5-34), mouse/rat	GHDSGFEVRHQKLVFFAEDVGSNKGAIIGL	3228.6	63338 (1 mg)
ß-Amyloid (8-40), mouse/rat	SGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVV	3462.0	62996 (1 mg)
ß-Amyloid (11-28), mouse/rat	EVRHQKLVFFAEDVGSNK	2103.4	63339 (1 mg)
ß-Amyloid (11-40), mouse/rat	EVRHQKLVFFAEDVGSNKGAIIGLMVGGVV	3170.7	62997 (1 mg)
ß-Amyloid (12-33), mouse/rat	VRHQKLVFFAEDVGSNKGAIIG	2385.8	63342 (1 mg)

Biotin Labeled ß-Amyloid Peptides

AnaSpec is pleased to provide a wide selection of β-amyloid peptides labeled with biotin at the N or C-terminus. Some of these peptides have a 6-carbon linker (6-aminohexanoic acid, LC) to create more space between the peptide and biotin. Biotin labeled β-amyloid peptide have been used in various applications such as β-amyloid protein binding studies (1), Aβ polymerization studies (2). Biotinylated fibrillar β-amyloid (1-42) has been used in electron microscopy (3).

Ref: 1. Nelson, TJ. & DL. Alkon, *J. Biol. Chem.* **282**, 31238 (2007); 2. Bohrmann, B. et al. *J. Biol. Chem.* **274**, 15990 (1999); 3. Liu, Y. et al. *Brain* **128**, 1778 (2005).

Table 1. A listing of biotin labeled β-amyloid peptides. Green shading denotes β-amyloid peptides with an amidated C-terminus.

Product Name	C-Terminal Biotin Label		N-Terminal Biotin Label	
	Aß-Lys(biotin)	Aß-Lys(LC-biotin)	Biotin-Aß	Biotin-LC-Aß
ß-Amyloid (1-9)		61973 (1 mg)		
ß-Amyloid (1-10)	62135 (1 mg)			
ß-Amyloid (1-10)-GG	62134 (1 mg)			
ß-Amyloid (1-10)	62973 (1 mg)			
ß-Amyloid (1-15)			62461 (1 mg)	
ß-Amyloid (1-16)		62136 (1 mg)		62458 (1 mg)
ß-Amyloid (1-28)	61260 (0.1 mg) 62465 (0.5 mg)		60459 (0.1 mg)	
ß-Amyloid (1-40)	61483-01 (0.1 mg) 61483-05 (0.5 mg)	23518-01 (0.1 mg) 23517 (0.5 mg)	23512-01 (0.1 mg) 23511-05 (0.5 mg) 23512 (1 mg)	24645-01 (0.1 mg) 24648 (0.5 mg) 24645 (1 mg)
ß-Amyloid (1-40), mouse, rat	63356 (0.1 mg)			61717-01 (0.1 mg) 61717-05 (0.5 mg) 61717-1 (1 mg)
ß-Amyloid (1-42)	61484-01 (0.1 mg) 61484-05 (0.5 mg)		23524-01 (0.1 mg) 23523-05 (0.5 mg)	24641-01 (0.1 mg) 24640 (0.5 mg)
ß-Amyloid (1-42), mouse/rat				61718-01 (0.1 mg) 61718-05 (0.5 mg)
Aß (1-42), 5-FAM labeled	23599-01 (0.1 mg) 23598 (0.5 mg)			
ß-Amyloid (2-40)		64221 (1 mg)		
ß-Amyloid (3-42)	61959-01 (0.1 mg)			
ß-Amyloid (4-42)		64223 (1 mg)		
ß-Amyloid (9-42)	62462 (0.5 mg)			
ß-Amyloid (10-20)				62972 (1 mg)
ß-Amyloid (10-35)	63745 (0.1 mg)			
ß-Amyloid (11-28)	62472 (0.5 mg)			
ß-Amyloid (11-40)	62471 (0.5 mg)			
ß-Amyloid (15-25)				62907 (1 mg)
ß-Amyloid (15-26)	62469 (0.5 mg)			
ß-Amyloid (17-21)	62467 (1 mg)			
ß-Amyloid (17-24)			61980 (1 mg)	
ß-Amyloid (17-28)	62466 (0.5 mg)			
ß-Amyloid (17-40)			23541-01 (0.1 mg) 23540 (0.5 mg) 23541 (1 mg)	23543-01 (0.1 mg) 24642 (0.5 mg) 23543 (1 mg)
ß-Amyloid (17-40)-KKK	62975 (0.1 mg)			
ß-Amyloid (18-28)			62448 (1 mg)	62971 (1 mg)
ß-Amyloid (22-41)				62455 (1 mg)
ß-Amyloid (25-35)			62451 (1 mg)	
ß-Amyloid (29-40)			62449 (1 mg)	
ß-Amyloid (29-42)			61986 (1 mg)	

ClearPoint™ Heavy Isotope Labeled ß-Amyloid Peptides

Product Name	Sequence	MW	Cat# (size)
ClearPoint™ ß-Amyloid (1-15), ^{13}C,^{15}N-Arg	DAEF-R*-HDSGYEVHHQ [R*=R(U-$^{13}C_6$, U-$^{15}N_4$)]	1836.9	64495 (0.05 mg)
ClearPoint™ ß-Amyloid (1-40), ^{13}C,^{15}N-Arg & Lys	DAEF-R*-HDSGYEVHHQ-K*-LVFFAEDVGSN-K*-GAIIGLMVGGVV [R*=R(U-$^{13}C_6$, U-$^{15}N_4$) & K*=K(U-$^{13}C_6$, U-$^{15}N_2$)]	4355.9	63737 (0.05 mg)
ClearPoint™ ß-Amyloid (1-40), ^{13}C-Leu^{17}	DAEFRHDSGYEVHHQK-L*-VFFAEDVGSNKGAIIGLMVGGVV [L*=L(U-$^{13}C_6$)]	4335.9	63740 (0.05 mg)
ClearPoint™ ß-Amyloid (1-40), ^{13}C,^{15}N-Leu^{17,34}	DAEFRHDSGYEVHHQK-L*-VFFAEDVGSNKGAIIG-L*-MVGGVV [L*=L(U-$^{13}C_6$,^{15}N)]	4343.9	64493 (0.05 mg)
ClearPoint™ ß-Amyloid (1-40), ^{13}C,^{15}N-Val^{24}, ^{13}C-Ile^{31,32}	DAEFRHDSGYEVHHQKLVFFAED-V*-GSNKGA-I*-I*-GLMVGGVV [V*=V(U-$^{13}C_6$,^{15}N) & I*=I(U-$^{13}C_6$)]	4347.9	64491 (0.05 mg)
ClearPoint™ ß-Amyloid (1-42), ^{13}C,^{15}N-Arg & Lys	DAEF-R*-HDSGYEVHHQ-K*-LVFFAEDVGSN-K*-GAIIGLMVGGVVIA [R*=R(U-$^{13}C_6$, U-$^{15}N_4$) & K*=K(U-$^{13}C_6$, U-$^{15}N_2$)]	4540.1	63738 (0.05 mg)
ClearPoint™ ß-Amyloid (1-42), ^{13}C-Leu^{17,34}	DAEFRHDSGYEVHHQK-L*-VFFAEDVGSNKGAIIG-L*-MVGGVVIA [L*=L(U-$^{13}C_6$)]	4526.1	64489 (0.05 mg)
ClearPoint™ ß-Amyloid (4-42), ^{13}C,^{15}N-Arg & Lys	F-R*-HDSGYEVHHQ-K*-LVFFAEDVGSN-K*-GAIIGLMVGGVVIA [R*=R(U-$^{13}C_6$, U-$^{15}N_4$) & K*=K(U-$^{13}C_6$, U-$^{15}N_2$)]	4224.8	63739 (0.05 mg)
ClearPoint™ ß-Amyloid (4-42), ^{13}C,^{15}N-Val^{12}	FRHDSGYE-V*-HHQKLVFFAEDVGSNKGAIIGLMVGGVVIA [V*=V(U-$^{13}C_5$, U-^{15}N)]	4204.8	63741 (0.05 mg)
ClearPoint™ ß-Amyloid (8-42), ^{13}C,^{15}N-Val^{12}	SGYE-V*-HHQKLVFFAEDVGSNKGAIIGLMVGGVVIA [V*=V(U-$^{13}C_5$, U-^{15}N)]	3649.1	63742 (0.05 mg)

Substrates and Inhibitors

Product Name	Sequence	MW	Cat# (size)
α-Secretase Substrate 1	Mca-HQKLVFFAK(Dnp) Mca, Ex/Em = 325/393 nm upon cleavage	1500.6	60271 (1 mg)
ß-Secretase Substrate 1a	Mca-EVKVDAEF-K(Dnp) Mca, Ex/Em = 325/393 nm upon cleavage	1447.5	60268 (1 mg)
ß-Secretase Substrate 2	Mca-EVKMDAEFK(Dnp) Mca, Ex/Em = 325/393 nm upon cleavage	1479.6	60269 (1 mg)
γ-Secretase Substrate	GGVVIATV-K(5-FAM)-rrr-NH_2	1668.9	62718 (1 mg)
APP (666-677) FRET Peptide	Mca-SEVKMDAEFR-Dap(Dnp)-NH_2 Mca, Ex/Em = 325/393 nm upon cleavage	1678.8	62075 (1 mg)
APP (667-676), Dnp-labeled	SEVKMDAEFR-DAP(DNP)-KK	1719.9	62074 (1 mg)
Mca-SEVNLDAEFR-K(Dnp)-RR-NH_2	Mca-SEVNLDAEFR-K(Dnp)-RR-NH_2 Mca, Ex/Em = 325 nm/ 393 nm upon cleavage	2001.1	24149 (1 mg) 24150 (5 mg)
DABCYL-KTEEISEVNLDAEF-EDANS	DABCYL-KTEEISEVNLDAEF-EDANS EDANS, Ex/Em = 340 nm/ 490 nm upon cleavage	2123.1	24197-025 (0.25 mg) 24197 (1 mg)
ß-Secretase Inhibitor 1	KTEEISEVN-Sta-VAEF, Sta = statine	1651.9	23958 (1 mg) 23959 (5 mg)
ß-Secretase Inhibitor 2	KTEEISEVN-Sta-VAEF-NH_2, Sta = statine	1650.8	23960 (1 mg) 23961 (5 mg)
Ac-[Pro^{18}, Asp^{21}]-ß-Amyloid (17-21)-NH_2, iAb5p	Ac-LPFFD-NH_2	678.8	61174 (1 mg)
Ac-[Pro^{18}, N-Me Phe^{19}]-ß-Amyloid (17-21)-NH_2, iAb5p-A1	Ac-LP-(NMe-F)-FD-NH_2	692.8	60620 (1 mg)

Amyloid Precursor Protein (APP) & Amyloid Precursor-Like Protein (APLP) Peptides

Product Name	Sequence	MW	Cat# (size)
APP (44-62)	HMNVQNGKWDSDPSGTKTC	2105.3	61983 (1 mg)
APP (96-110)	Ac-NWCKRGRKQCKTHPH-NH_2 (Disulfide bond: 3-10)	1918.2	25372 (0.5 mg) 25373 (1 mg)
APP (135-155)	FLHQERMDVCETHLHWHTVAK	2618.0	60236-1 (1 mg) 60236-5 (5 mg)
APP (319-335)	AKERLEAKHRERMSQVM	2099.5	25374 (0.5 mg) 25375 (1 mg)
APP (328-332)	RERMS	677.8	25376 (0.5 mg) 25377 (1 mg)
APP (394-410)	AKERLEAKHRERMSQWM	2186.6	60233-1 (1 mg) 60233-5 (5 mg)
APP (667-676) FRET Peptide	Mca-SEVKMDAEFR-Dap(Dnp)-NH_2 Mca, Ex/Em = 330/390 nm upon cleavage	1678.8	62075 (1 mg)
APP (667-676)	SEVKMDAEFR	1211.4	62065 (1 mg)
APP (667-676), Swedish Mutation	SEVNLDAEFR	1179.3	62060 (1 mg)
APP (667-676), Dnp-labeled	SEVKMDAEFR-DAP(DNP)-KK	1719.9	62074 (1 mg)
APP (668-675), Swedish Mutation	EVNLDAEF	936.0	62515 (1 mg)
[Asn^{670}, Leu^{671}]-RE(EDANS)-APP (668-675)-K(DABCYL)-R FRET Peptide	R-E(EDANS)-EVNLDAEF-K(DABCYL)-R EDANS, Ex/Em = 340 nm/ 490 nm upon cleavage	2005.3	62236 (0.5 mg)
APP (721-770)	VMLKKKQYTSIHHGVVEVDAAVTPEERHLSKMQQNGYENPTYK FFEQMQN	5910.7	63322 (0.5 mg)
APP (732-751)	HHGVVEVDAAVTPEERHLSK	2210.5	25378 (0.5 mg) 25379 (1 mg)
[Phe^{743}]-APP (734-751)	GVVEVDAAVFPEERHLSK	1982.2	62289 (1 mg)
APP (740-770)	AAVTPEERHLSKMQQNGYENPTYKFFEQMQN	3717.1	62073 (1 mg)
APP (741-770)	AVTPEERHLSKMQQNGYENPTYKFFEQMQN	3646.1	63303 (1 mg)
Cys-APP (751-770)	CKMQQNGYENPTYKFFEQMQN	2629.0	63302 (1 mg)
APLP1 (594-610)	GGGSLIVLSLLLLRKKK	1795.3	62913 (1 mg)
APLP2 (706-721)	AIATVIVISLVMLRKR	1783.3	62912 (1 mg)

Other Peptides - *Please check AnaSpec's website for peptides such as:*

Amylins	ß-Amyloid Binding Peptides	Amyloid Toxicity Inhibitor Peptides
Aß-DIPs	Humanin Peptides	Islet Amyloid Polypeptides (IAPP)
Tau Peptides	Collagen-like Alzheimer Amyloid Plaque Component Precursor (CLAC-P)	

α-Synuclein and β-Secretase Recombinant Proteins

Product Name	Description	MW	Cat# (size)
α-Synuclein (1-140), human	From GenBank Accession# NP_000336, expressed and purified from *E. coli*.	~14 kD	55456 (0.5 mg)
α-Synuclein (1-140), human, HiLyte Fluor™ 488 labeled	From GenBank Accession# NP_000336, expressed and purified from *E. coli*; labeled with HiLyte Fluor™ 488 (Ex/Em=503/528 nm).	~17 kD	55457 (0.2 mg)
ß-Secretase (BACE1), human	From the catalytic domain of BACE (Swiss-Prot P56817), expressed and purified from *E. coli*.	~45 kD	72139 (0.05 mg)

DHL™ Fluorescent β-Amyloid Sampler Kits

The DHL™ Fluorescent ß-Amyloid (1-40) and ß-Amyloid (1-42) Sampler Kits provide researchers, in one convenient package, three fluorophore N-terminally labeled Aß's (1-40) or (1-42), one N-terminal biotin-labeled Aß (1-40) or (1-42), two unlabeled control peptides and a solvent for dissolving the peptides. A stock concentration of 100 uM is obtained for each peptide by dissolving in 5 ul of the provided solvent and adding 45 uL deionized water. This reconstituted stock solution may be stored at -20°C for up to one week.

Fluorophore labeled ß-amyloid peptides have been used in investigating Aß's aggregation (1), microglial activation, phagocytosis (2), and Aß generation and clearance. For immunofluorescence phagocytosis assay, dilute the fluorophore labeled ß-amyloid stock solution in serum-free culture medium to 10-1,000 nM, and let the peptide(s) aggregate for 1 hr at room temperature (2). The aggregated Aß is first vortexed before adding to the microglial culture. The uptake of ß-amyloid in the cells can be examined by fluorescent microscopy over time. Alternatively, cells can be detached and analyzed by flow cytometry. For other applications, researchers need to establish their own protocols.

DHL™ Fluorescent β-Amyloid (1-40) Sampler Kits, cat# 72070

Catalog #	Peptide	Ex/Em (nm/nm)
24236	Unlabeled ß-amyloid (1-40)	N/A
24626	Scrambled ß-amyloid (1-40) AEGDSHVLKEGAYMEIFDVQGHVFGGKIFRVVDLGSHNVA	N/A
23511	Biotin-ß-amyloid (1-40)	N/A
23513	5-FAM-ß-amyloid (1-40)	494/521
60491	HiLyte Fluor™ 488-ß-amyloid (1-40)	503/528
60488	5-TAMRA-ß-amyloid (1-40)	544/572

DHL™ Fluorescent β-Amyloid (1-42) Sampler Kits, cat# 72071

Catalog #	Peptide	Ex/Em (nm/nm)
24224	Unlabeled ß-amyloid (1-42)	N/A
25382	Scrambled ß-amyloid (1-42) AIAEGDSHVLKEGAYMEIFDVQGHVFGGKIFRVVDLGSHNVA	N/A
23524	Biotin-ß-amyloid (1-42)	N/A
23526	5-FAM-ß-amyloid (1-42)	494/521
60479	HiLyte Fluor™ 488-ß-amyloid (1-42)	503/528
60476	5-TAMRA-ß-amyloid (1-42)	544/572

References:
1. Frost, D. et al. *Eur. J. Biochem.* **270**, 654 (2003).
2. Li, R. *J. Neurochem.* **75**, 1447 (2000).

SensoLyte® 520 α-Secretase or TACE Assay Kit

TACE (TNF-α converting enzyme), ADAM17 or α-secretase belongs to the ADAM (A Disintegrin and Metalloprotease) family of proteins, which are involved in myogenesis, neurogenesis, fertilization through the ectodomain shedding of cell surface proteins (1). TACE, the first 'sheddase' to be identified and the predominant protease responsible for the generation of soluble mature TNF-α (2), plays a crucial role in acute and chronic inflammation. Since TNF-α is a crucial mediator in the inflammatory process, considerable efforts have been made in the research and development of anti-TNF-α agents, for the purpose of reducing the severity of inflammatory responses in disease states (3, 4). The inhibition of TACE by a pharmacological agent may represent an alternative approach to modulate the effect of TNF-α (5). TACE is also responsible for the proteolytic cleavage of amyloid precursor protein, L-selectin, transforming growth factor-α (1, 6, 7).

The SensoLyte® 520 TACE Activity Assay Kit is a homogeneous assay that can be used to detect the activity of TACE and for screening of TACE inhibitors. It contains a QXL™ 520/5-FAM FRET substrate, derived from a sequence surrounding the cleavage site of TACE (8). In the intact FRET peptide, the fluorescence of 5-FAM is quenched by QXL™ 520. Active TACE cleaves FRET substrate into two separate fragments resulting in an increase of 5-FAM fluorescence which can be monitored at excitation/emission (Ex/Em)=490/520 nm. The long wavelength fluorescence of 5-FAM is less interfered by the autofluorescence of cellular components and test compounds.

	SensoLyte® 520 TACE (α-Secretase) Activity Assay Kit Cat# 72085
FRET pair	QXL™ 520/5-FAM
Ex/Em (nm/nm)	490/520
Km (μM)	32
Sensitivity (ng/ml)	3.1

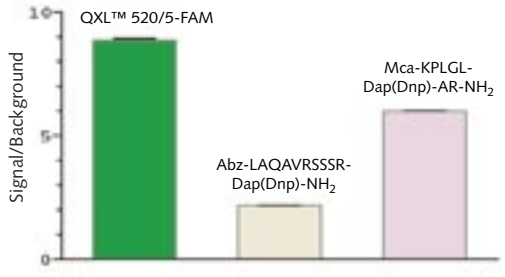

Figure 2. Comparison of three TACE assay kits. The SensoLyte® 520 TACE Assay Kit contains a QXL™ 520/5-FAM FRET substrate, which is clearly superior to two FRET substrates used in other assay kits.

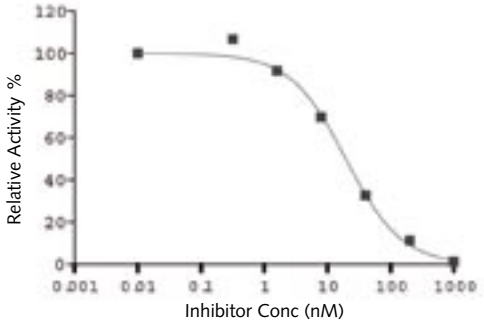

Figure 3. TAPI-0 inhibition of TACE activity measured with SensoLyte® 520 TACE Activity Assay Kit (TAPI-0 is a patented product of Research Corporation Technologies).

Related Products

α-Secretase Substrate, Mca-HQKLVFFAK(Dnp), Ex/Em=325/393 nm, cat# 60271 (1 mg).
TACE FRET Substrate I, DABCYL-LAQAVRSSSR-EDANS, Ex/Em=335/490 nm, cat# 25043 (1mg), 25349 (5 mg).
Anti-TACE (CT), cat# 28075.
Anti-Amyloids, cat# 53224, 54294, 54295.
Anti-APPs, cat# 54095, 54096.
Anti-Tau's: See p. 20 or search online by typing "anti-Tau" in the search box.
SensoLyte® Cathepsin D, S Assay Kits, cat# 72097-72100.
SensoLyte® 520 and AMC Calpain Assay Kits, cat# 72149-72150.

References:
1. Peschon, JJ. et al. *Science* **282**, 1281 (1998).
2. Moss, ML. et al. *Nature* **385**, 733 (1997).
3. Feldman, M. et al. *Transplant Proc.* **30**, 4126 (1998).
4. Siegel, SA. et al. *Cytokine* **7**, 15 (1995).
5. Levin, JI. et al. *Bioorg. Med. Chem. Lett.* **13**, 2799 (2003).
6. Buxbaum, JD. et al. *J. Biol. Chem.* **273**, 27765 (1998).
7. Smalley, DM. and K. Ley, *J. Cell. Mol. Med.* **9**, 255 (2005).
8. Jin, G. et al. *Anal. Biochem.* **302**, 269 (2002).

SensoLyte® 520 β-Secretase Assay Kit

Amyloid Precursor Protein, APP, a protein of about 770 amino acids, is cleaved by α- and β-Secretases. β-Secretase is also known as BACE1 (β-secretase APP cleaving enzyme) or memapsin. α-Secretase processes the majority of APP, producing a 83-amino acid C-terminal fragment, C83; while only a small amount is processed by β-Secretase, producing a 99-amino acid C-terminal fragment, C99. Subsequent cleavages of C83 and C99 by γ-Secretase produces a 3-kD (p3) protein in the former and a 4-kD (β-amyloid) protein in the latter and a C-terminal that is 57-59 residues long in both fragments (1-2). The 4-Kd consists of Aβ which are 39 to 42 amino acids in length, with Aβ (1-42) being the major component of amyloid plaques which accumulates in neurons of Alzheimer's diseased brain (3, 4). Thus, β-secretase is an important target for developing drugs for Alzheimer's Disease.

The SensoLyte® 520 β-Secretase Assay Kit provides a convenient assay for HTS of β-secretase inhibitors and for the continuous quantification of β-secretase activity using a HiLyte Fluor™ 488/QXL™ 520 based FRET substrate. The sequence of this FRET peptide is derived from the β-secretase cleavage site on the Swedish APP mutation (5, 6). This mutation enhances β-secretase to process APP and results in an early onset of AD. In the FRET peptide, the fluorescence of HiLyte Fluor™ 488 is quenched by QXL™ 520 until this peptide is cleaved into two separate fragments by β-secretase at the Leu-Asp bond. Upon cleavage, the fluorescence of HiLyte Fluor™ 488 is recovered, and can be continuously monitored at Ex/Em = 488 nm/520 nm. The assays are performed in a convenient 96-well microplate format. 384-well or 1536-well format can also be used with minor modifications.

	SensoLyte® 520 β-Secretase Assay Kit Cat# 71144
FRET pair	HiLyte Fluor™ 488/QXL™ 520
Ex/Em (nm/nm)	488/520
Km (μM)	15
Sensitivity (mU/μl)	0.03

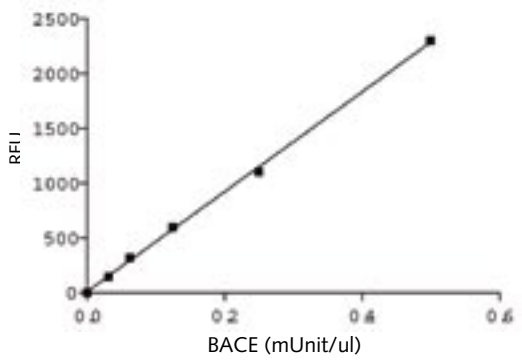

Figure 4. Sensitivity of the SensoLyte® 520 β-Secretase Assay kit. BACE, at different dilutions, was incubated with the FRET substrate at 37C and fluorescence measured after 40 min (FlexStation 384II, Molecular Devices). Sensitivity of the assay was 0.03 mU/ul.

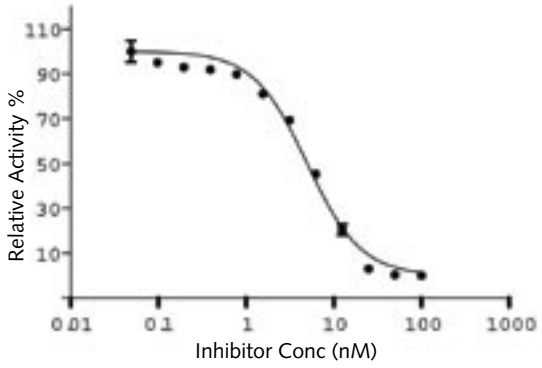

Figure 5. Inhibition studies. FRET substrate (20 mM) was incubated with enzyme and a secretase inhibitor (cat# 23960). Kinetic readings were taken every 5 min for 30 min at 37C (FlexStation 384II, Molecular Devices). The calculated IC_{50} was 5.62 nM.

Related Products

ß-Secretase Substrate 1a (control), Mca-EVKVDAEF-K(Dnp), Ex/Em=325 nm/393 nm, cat# 60268 (1 mg).
ß-Secretase Substrate 2, Mca-EVKMDAEF-K(Dnp), Ex/Em=325 nm/393 nm, cat# 60269 (1 mg).
ß-Secretase Inhibitor 1, KTEEISEVN-Sta-VAEF (Sta = statine), cat# 23958 (1 mg), cat# 23959 (5 mg).
ß-Secretase Inhibitor 2, KTEEISEVN-Sta-VAEF-NH_2 (Sta = statine), cat# 23960 (1 mg), cat# 23961 (5 mg).
SensoLyte® Cathepsin D, S Assay Kits, cat# 72097-72100.
SensoLyte® 520 and AMC Calpain Assay Kits, cat# 72149-72150.

References:
1. Selkoe DJ. *Nature* **399**, A23 (1999).
2. Suh, Y-H. and F. Checler, *Pharmacol. Rev.* **54**, 469 (2002).
3. Suzuki, N. et al. *Science* **264**, 1336 (1994).
4. Iwatsubo, T. et al. *Neuron* **13**, 45 (1994).
5. Citron, M. et al. *Nature (London)* **360**, 672 (1992).
6. Mullan, M. et al. *Nat. Genet.* **1**, 345 (1992).

Anti-Tau Antibodies

Complementing one of the world's most comprehensive collections of β-amyloid peptides, this extensive collection of phospho- and non-phospho-specific Tau antibodies demonstrates AnaSpec's commitment to delivering integrated solutions for Alzheimer's research. Rabbit anti-Phospho-Tau antibodies raised against synthetic phosphopeptides derived from the human Tau sequence are listed in the table below. "Paired" denotes the same sequence used in raising the antibody as in the phosphorylated sequence, but which targets the non-phophorylated version of the epitope.

Product	Cat# for 50 ug	Cat# for 25 ug	Type*	Species Reactivity†	Application
Anti-Tau	53884	53884-025	m	Hu, Ms, Rt, Bo	WB, IF, IP
Anti-Tau (pThr181)	54960	54960-025	p	Hu, (Ms, Rt)	IHC
Anti-Tau (paired181, 184)	54961	54961-025	p	Hu, Ms, (Rt)	WB, IHC
Anti-Tau (pSer184)	55413	55413-025	p	Hu	WB, IHC
Anti-Tau (pSer195)	55414	55414-025	p	Hu	WB, IHC
Anti-Tau (paired195)	55460	55460-025	p	Hu, Ms, Rt	WB, IHC
Anti-Tau (pSer198)	54962	54962-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (pSer199, 202)	54963	54963-025	p	Hu, (Ms, Rt, Bo)	WB
Anti-Tau (pSer202)	28017	28017-025	p	Hu, (Ms, Rt)	WB
Anti-Tau (paired202)	28018	28018-025	p	Hu, Ms, (Rt)	WB
Anti-Tau (pThr205)	54964	54964-025	p	Hu, (Ms, Rt, Bo)	WB
Anti-Tau (paired198, 199, 202, 205)	54965	54965-025	p	Hu, Ms, (Rt, Bo)	IHC, WB
Anti-Tau (pThr212)	54966	54966-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (pSer214)	54967	54967-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (pThr217)	54968	54968-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (paired212, 214, 217)	54969	54969-025	p	Hu, Ms, (Rt, Bo)	IHC, WB
Anti-Tau (pThr231)	55313	55313-025	p	Hu, (Ms, Rt)	Dot Blot
Anti-Tau (paired231)	55415	55415-025	p	Hu, (Ms, Rt)	IHC, WB
Anti-Tau (pSer235)	55315	55315-025	p	Hu, (Ms, Rt)	Dot Blot
Anti-Tau (paired235)	55461	55461-025	p	Hu, Ms, Rt	IHC, WB
Anti-Tau (pSer237)	55321	55321-025	p	Hu, (Ms, Rt, Bo)	Dot Blot
Anti-Tau (paired237)	55322	55322-025	p	Hu, (Ms, Rt, Bo)	Dot Blot
Anti-Tau (pSer238)	55323	55323-025	p	Hu, (Ms, Rt, Bo, Xe, Ck)	Dot Blot
Anti-Tau (pSer262)	54973	54973-025	p	Hu, (Ms, Rt, Bo, Zf)	IHC
Anti-Tau (paired262)	54974	54974-025	p	Hu, Ms, (Rt, Bo)	IHC, WB
Anti-Tau (pSer356)	54975	54975-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (paired356)	54976	54976-025	p	Hu, Ms, (Rt, Bo)	IHC, WB
Anti-Tau (pSer396)	54977	54977-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (pSer400)	54978	54978-025	p	Hu, (Ms, Rt, Bo)	IHC
Anti-Tau (pSer404)	28023	28023-025	p	Hu, (Ms, Rt)	WB
Anti-Tau (paired404)	28024	28024-025	p	Hu, (Ms, Rt)	WB
Anti-Tau (paired396, 400, 404)	54979	54979-025	p	Hu, Ms, (Rt, Bo)	IHC, WB
Anti-Tau (pSer409)	55417	55417-025	p	Hu, (Ms, Rt)	IHC, WB
Anti-Tau (pSer412)	55418	55418-025	p	Hu, (Ms, Rt)	IHC, WB
Anti-Tau (pSer413)	55325	55325-025	p	Hu, (Ms, Rt)	Dot Blot
Anti-Tau (paired409, 412, 413)	55416	55416-025	p	Hu, (Ms, Rt)	IHC, WB

* Monoclonal (m) or Polyclonal (p).
† The antigen peptide sequence used in raising the antibody is homologous for the species enclosed in brackets. However, reactivity of the antibody to these species has not been tested.

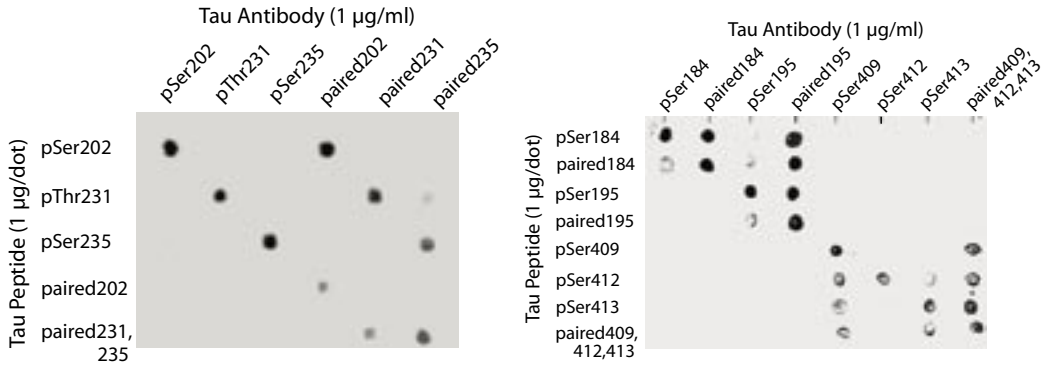

Figure 6. Dot blots of Tau Antibodies.

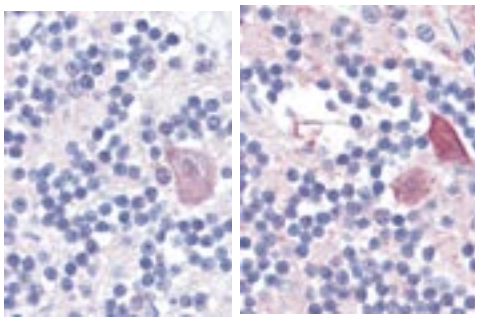

Figure 7. IHC of formalin-fixed paraffin-embedded human tissues. Strong staining seen in neuropil, cell processes and Golgi neurons in the cerebellum probed with anti-Tau (paired 198,199, 202, 205) cat# 54965 (left panel). Moderate to strong staining seen in neuropil, cell processes and Golgi neurons of cerebellum probed with anti-Tau (paired212,214,217), cat# 54969 (right panel).

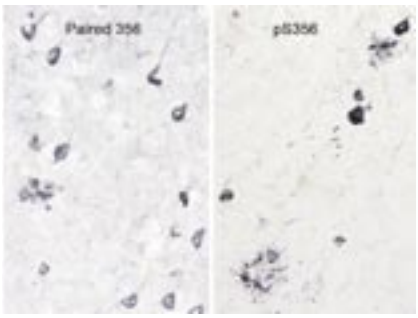

Figure 8. IHC of AD mid-temporal cortex probed with anti-Tau paired (Ser356, cat# 54976, 50 ug; cat# 54976-025, 25 ug) and anti-Tau (pSer356, cat# 54975, 50 ug; cat# 54975-025, 25 ug). Detection using goat anti-rabbit biotinylated secondary antibody, followed by incubation with avidin-biotinylated-HRP complex. Visualization by heavy metal intensification of DAB, 40x objective. Image courtesy of Dr. Claudia Schwab (in Dr. Patrick McGeer's lab, University of British Columbia, Vancouver, BC, Canada).

Product*	Cat#	Type**	Species Reactivity†	Application
Anti-β-Amyloid (1-40)	54295	p	Hu	IP
Anti-β-Amyloid (NT)	53224	p	Hu	IHC-P, WB, IP
Anti-β-Amyloid and BACE Sampler Set	54294	p	Hu, (Ms, Rt)	WB, IHC
Anti-APP (AbNT)	54095	p	Hu, Ms, Rt	WB, IHC
Anti-APP (CT)	54096	p	Hu, Ms, Rt	WB, IHC
Anti-APP (paired668)	54980	p	Hu, Ms, Rt, (Ck)	WB
Anti-APP (pThr668)	54296	p	Hu, Ms, Rt, Xe	WB
Anti-BACE2 (CT)	54100	p	Hu	WB, IHC
Anti-BACE2 (NT)	54099	p	Hu, Ms, Rt	WB, IHC
Anti-BACE (CT)	54101	p	Hu, Ms	WB, IHC
Anti-Presenilin-1 (CT)	54683	p	Hu, Ms, Rt	WB
Anti-Presenilin-1 (NT)	53792	p	Hu, Ms, Rt	IHC-P
Anti-Presenilin-1 (chicken polyclonal)	54297	p	Hu, Ms, Rt	WB
Anti-Presenilin-2 (chicken polyclonal)	54298	p	Hu, Ms, Rt	WB
Anti-PEN2 (CT)	54287	p	Hu, Ms, Rt	WB
Anti-PEN2 (NT)	54288	p	Hu, Ms, Rt	WB

* More Alzheimer's Disease related antibodies can be found online by typing the name of the antibody in the search box.
**Monoclonal (m) or Polyclonal (p)
† The antigen peptide sequence used in raising the antibody is homologous for the species enclosed in brackets. However, reactivity of the antibody to these species has not been tested.

Vital Stains for ß-Amyloids

AnaSpec provides the following colorimetric and fluorometric imaging reagents for β-amyloids.

Congo Red and Its Derivatives

Product Name	Application	Abs (nm)	Em (nm)	MW	Cat# (size)
Congo Red *UltraPure Grade*	Congo red (CR) is a dye that has been in use for several decades for the detection of amyloid in tissue sections. It is used in the early diagnosis and classification of amyloid deposition and differentiation from other glomerular fibrillar deposits. CR binding results in a characteristic yellow-green birefringence under crossed polarization. Congo red fluorescence is simple to perform and is easier to evaluate than CR in bright light. When combined with immunohistochemistry, CR is visible under UV whereas CR is masked in bright light. *Ref:* Tzankov, A. et al. *Acta. Med. Austriaca* **30**, 29 (2003); Roterman, I. et al. *Med. Sci. Monit.* **7**, 771 (2001); Khurana, R. et al. *J. Biol. Chem.* **276**, 22715 (2001).	497	N/A	696.7	83016 (1 g)
BSB, 1-[(trans,trans)-Bromo-2,5-bis-(3-hydroxy carbonyl-4-hydroxy) styrylbenzene]	BSB, a Congo Red derivative, is a cell-permeable fluorescent probe that specifically binds and labels intracellular β-amyloid aggregates both *in vitro* (Ki = 400 nM) and *in vivo*. It is used in live animals and also used as an antemortem diagnostic tool for animal models of Alzheimer's disease. The distinctive properties of BSB allow it to be used for quantitative monitoring of amyloid fibrils formation assembled from the Aβ peptide, β-synuclein and tau. *Ref:* Crystal, AS. et al. *J. Neurochem.* **86**, 1359 (2003); Kung, MP. et al. *J. Mol. Neurosci.* **19**, 7 (2002).	340	520	481.3	88300 (5 mg)
Chrysamine G	Chrysamine G (CG) is a carboxylic acid analog of Congo Red, a classic histologic dye which stains amyloid. CG binds to the β-amyloid protein of AD *in vitro*. This dye can cross the blood-brain barrier and partitions into the brain of normal mice. The binding of CG correlates with the number of senile plaques and neurofibrillary tangles. In addition, CG can be used to stain cerebrovascular amyloid in tissue sections. *Ref:* Mathis, CA. et al. *Curr. Pharm. Des.* **10**, 1469 (2004); KlunK, WE. et al. *Life Sci.* **63**, 1807 (1998); KlunK, WE. et al. *Neurobiol. Aging 1***6**, 541 (1995).	386	N/A	482.5	88303 (10 mg)
Half Chrysamine G	Half chrysamine G (hCG) has a lower affinity for Aβ as compared to that of CG. Both CG and hCG are equally efficacious in reducing Aβ-induced neuronal death at a concentration of 0.1-1 uM, indicating that the mechanism of action for CG is not due to its chelating activity, but rather due to its anti-oxidant activity. *Ref:* Ishii, K. et al. *Neurosci. Lett.* **333**, 5 (2002).	342	N/A	242.2	88305 (10 mg)

Thioflavin and Its Derivatives

Product Name	Application	Abs (nm)	Em (nm)	MW	Cat# (size)
Thioflavin T *UltraPure Grade*	Thioflavin T (ThT), a benzothiazole dye is a classic amyloid stain for senile plaques containing β-amyloid peptide in AD brain. It binds rapidly and specifically to the anti-parallel β-sheet fibrils formed from synthetic β-amyloid (1-40), but does not bind to monomer or oligomeric intermediates. The fibrillar β-sheet-bound dye species undergoes a characteristic 120 nm red shift of its excitation spectrum that may be selectively excited at 450 nm, resulting in a fluorescence signal at 482 nm. ThT is a useful probe for the aggregated fibrillar state of β-amyloid (1-40) fibrils as the amyloid-specific fluorescence reports only fibrillar species. The binding of ThT does not interfere with the aggregation of this peptide into amyloid fibrils. *Ref:* Ban, T. et al. *J. Biol. Chem.* **278**, 16462 (2003); Kung, MP. et al. *Brain Res.* **956**, 202 (2002); De Ferrari, GV. et al. *J. Biol. Chem.* 276, 23282 (2001).	412	482	318.9	88306 (1 g)
BTA-1 [2-(4′-methyl-amino)phenyl) benzothiazole]	BTA-1, an uncharged derivative of thioflavin-T, has a high affinity for Aβ fibrils and shows very good brain entry and clearance. BTA-1 does not appear to bind significantly to common neuroreceptors or transporter sites. It exhibits high affinity for amyloid deposits [Ki = 11 nM for Aβ (1-40)]. BTA-1 crosses the blood brain barrier and displays up to 50-fold higher affinity than ThT. It selectively stains cerebral plaques and cerebrovascular amyloid deposits in the brains of PS1/APP transgenic mice. *Ref:* Ishikawa, K. et al. *J. Gen. Virol.* **85**, 1785 (2004); Klunk, WE. et al. *J. Neurosci.* **23**, 2086 (2003).	350	N/A	240.3	88301 (10 mg)
BTA-2 [2-(4′-dimethyl-amino)phenyl) 6-methyl-benzothiazole]	BTA-2 is an uncharged derivative of thioflavin-T that exhibits high affinity for amyloid deposits (Ki = 143 nM for Aβ(1-40)) and can cross the blood brain barrier. It displays up to 6-fold higher affinity than ThT and stains both plaques and neurofibrillary tangles in post mortem AD brain. *Ref:* Mathis, CA. et al. *Bioorg. Med. Chem. Lett.* **12**, 295 (2002); Kung, HF. et al. *J. Am. Chem. Soc.* **123**, 12740 (2001).	356	437	268.4	88302 (100 mg)