



Catalog #	Aliquot Size
A42-58-100	100 µg
A42-58-500	500 µg
A42-58-1MG	1 mg

Amyloid Beta Peptide (1-42)

Synthetic peptide substrate

Catalog # A42-58

Lot # E4198-38

Product Description

The Amyloid Beta Peptide (42 aa) sequence is DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA. It is produced synthetically and treated with 1,1,1,3,3,3-Hexafluoro-2-propanol (HFIP) prior to drying which breaks down pre-formed fibrils and monomerizes the peptide. The protein accession number is [P05067](#).

Alternative Names

Abeta Protein; Abeta peptide; Amyloid beta precursor protein peptide; APP

Purity

Certified >95% pure using mass spec and HPLC.

Formulation

Peptide supplied as a dried peptide film.

Storage and Stability

Store product at -20°C. For optimal storage, aliquot diluted product into smaller quantities and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Reconstitution Protocol

It is recommended the re-suspended peptide is kept on ice and used immediately to avoid aggregation. While several methods of monomer resuspension are detailed in the literature, we recommend the following protocol for resuspending 1 mg of peptide into a 1mg/mL solution.

1. Bring dried peptide to room temperature for 10 minutes.
2. Freshly open a sealed vial of DMSO (Sigma Hybri-Max D2650). *Fresh DMSO is critical as it will absorb water over time, which can affect re-suspension as soluble monomer.*
3. Add 20 µL fresh DMSO to peptide aliquot, mix well by pipetting up and down. Take care to scrape inside lower walls of tube to ensure complete resuspension of the film. *Do not store DMSO stock on ice as it will freeze.*
4. Vortex DMSO stock for 10 seconds, bath sonicate for 10 minutes.
5. Add 980 µL of cold filter sterilized dH₂O. *Optional – Centrifuge monomer 14,000 x g for 5 minutes at 4°C and keep supernatant to remove any material that was not fully resuspended.*
6. Keep monomer on ice and use immediately.

Sample Data

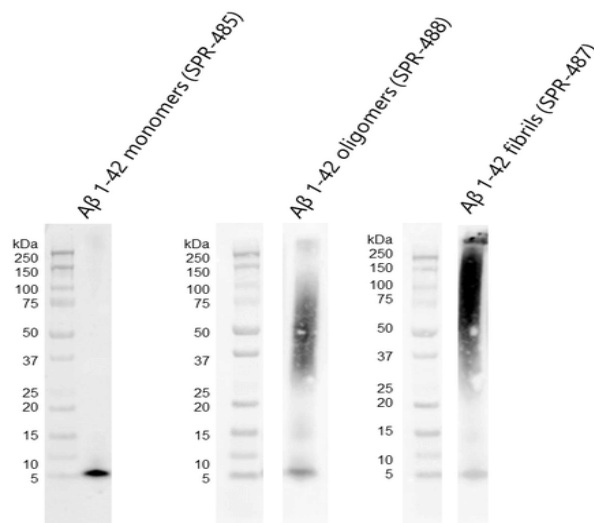


Figure 1. Western blot of amyloid 1-42 monomers (left), oligomers (middle), and fibrils (right) using anti-amyloid beta 6E10 antibody. Amyloid beta constructs at 160 pmol were run on 4-12% Bis-Tris SDS-PAGE, transferred to nitrocellulose in the presence of 0.02% v/v Tween-20, and blotted with 1:1000 mouse 6E10 primary antibody (Biolegend). Oligomers observed under TEM/AFM show distinct dimer/trimer bands as well as a signal from ~37-75 kDa (middle). Fibrils observed until TEM/AFM show a signal greater than 100 kDa and a distinct signal in the stacking gel (right).

Amyloid Beta Peptide (1-42)

Synthetic peptide substrate

Catalog #	A42-58
Lot #	E4198-38
Purity	Certified >95% pure using mass spec and HPLC.
Format	100 µg dried peptide film
Stability	1yr at -20°C from date of shipment
Storage & Shipping	Store product at -20°C. For optimal storage, aliquot diluted product into smaller quantities and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped at ambient temperature.

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SAFETY DATA SHEET

Article 1 - Product Identification

Product Name: Amyloid Beta Peptide (1-42)**Catalog # A42-58**

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Manufacturer's Name: SignalChem Biotech Inc.
Street Address: 110-13120 Vanier Place
City, Prov. Postal Code: Richmond, BC, V6V 2J2
Fax: 604-232-4601
EMERGENCY PHONE: 604-232-4600

Article 2 - Hazards Identification

Emergency Overview: The product contains no substances which at their given concentration, are considered to be hazardous to health.

WHMIS Classification: Not WHMIS controlled

GHS Classification: Not a dangerous substance according to GHS.

Potential health effects:

Inhalation: H333 – May be harmful if swallowed
Skin: H313 – May be harmful in contact with skin
Eyes: May cause eye irritation
Ingestion: H303 – May be harmful if swallowed

Precautionary Statements:

Inhalation: P304+P312 – If inhaled, remove to fresh air. Consult a physician if necessary.
Skin: P302+P312 – If on skin, wash with soap and plenty of water. Consult a physician if necessary.
Eyes: Wash with plenty of water as a precaution.
Ingestion: P301+P312 – Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if necessary.

Article 3 - Composition/Information on Ingredients

Common Name	Chemical Name/Formula	CAS-No.	Concentration
Peptide	-	NA	≤100%

Article 4 - First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breath in fresh air. If cannot breath, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Consult a physician.
- **After swallowing:** Rinse the mouth with plenty of water and consult a physician.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Clean contaminated surface thoroughly.

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Article 7 - Handling and Storage

- **Precautions for safe handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20 °C.

Article 8 - Exposure Controls/Personal Protection

- **Appropriate engineering controls:**
Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
 - Respiratory protection:**
Ensure adequate ventilation, especially in confined areas.
 - Skin/body protection:**
Wear protective gloves and clothing. Use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
 - Eye/face protection:**
Safety glasses with side-shields (or goggles) approved under appropriate government standards.
 - General hygiene considerations:**
Handle in accordance with good industrial hygiene and safety practice.

Article 9 – Physical and Chemical Properties

Appearance: Solid.	Danger of explosion: No data available.
Odour/Odour Threshold: Not determined.	Explosion limits: No data available.
pH: No data available.	Decomposition temperature: No data available.
Melting point/freezing point: Not determined.	Vapor pressure at 20 °C: No data available.
Boiling point/Boiling range: No data available.	Density: No data available.
Flash point: No data available.	Relative density: No data available.
Flammability (solid, gaseous): Not determined.	Vapor density: No data available.
Ignition temperature: No data available.	Evaporation rate: No data available.
Auto-igniting: No data available.	Solubility in / Miscibility with Water: Fully miscible.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No data available.
- **Incompatible materials:** No data available.
- **Hazardous decomposition products:** No data available.

Article 11 - Toxicological Information

- **Acute toxicity:** Product does not present an acute toxicity hazard based on known or supplied information.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
 - Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
 - Ingestion:** May be harmful if swallowed.
 - Skin:** May be harmful if absorbed through skin. May cause skin irritation.
 - Eyes:** May cause eye irritation.
- **Signs and Symptoms of Exposure:** Not available.
- **Synergistic effects:** Not available.

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Article 12 - Ecological Information

- **Eco-toxicity:** Not applicable.
- **Biodegradability:** Not applicable.
- **Bio-accumulative potential:** Not applicable.
- **Mobility in soil:** Not applicable.
- **PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** Not applicable.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

Article 15 - Regulatory Information

Safety, health, and environmental regulations/legislation specific for the substance or mixture.

Canadian substance listings:

- **WHMIS Classification:** Non-hazardous.
- **GHS label elements:** Not applicable.
- **Signal word:** Not applicable.
- **Hazard statements:** Not applicable.

Article 16 - Other Information

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.

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