

β-Amyloid (1-42), human TFA

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|-----------------------------|---|--|
| Cat. No.: | HY-P1363 | |
| CAS No.: | 107761-42-2 | |
| Molecular Formula: | C ₂₀₅ H ₃₁₂ F ₃ N ₅₅ O ₆₂ S | |
| Molecular Weight: | 4628.06 | |
| Sequence: | 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-Ile-Ala | |
| Sequence Shortening: | DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA | |
| Target: | Amyloid-β | |
| Pathway: | Neuronal Signaling | |
| Storage: | Powder -80°C 2 years -20°C 1 year In solvent -80°C 6 months -20°C 1 month | |

DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA (TFA salt)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (10.80 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

| Concentration | Solvent | Mass | | |
|---------------------------|---------|-----------|-----------|-----------|
| | | 1 mg | 5 mg | 10 mg |
| Preparing Stock Solutions | 1 mM | 0.2161 mL | 1.0804 mL | 2.1607 mL |
| | 5 mM | 0.0432 mL | 0.2161 mL | 0.4321 mL |
| | 10 mM | 0.0216 mL | 0.1080 mL | 0.2161 mL |

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (0.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.5 mg/mL (0.54 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (0.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

β-Amyloid (1-42), human TFA (Amyloid β-Peptide (1-42) (human) TFA) is a 42-amino acid peptide which plays a key role in the pathogenesis of Alzheimer disease^[1].

In Vitro

β -Amyloid Aggregation Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

1. Solid A β peptide was dissolved in cold hexafluoro-2-propanol (HFIP). The peptide was incubated at room temperature for at least 1h to establish monomerization and randomization of structure.
 2. The HFIP was removed by evaporation, and the resulting peptide was stored as a film at -20 or -80 °C.
 3. The resulting film was dissolved in anhydrous DMSO at 5 mM and then diluted into the appropriate concentration and buffer (serum- and phenol red-free culture medium) with vortexing.
 4. Next, the solution was age 48h at 4-8 °C. The sample was then centrifuged at 14000g for 10 min at 4-8 °C; the soluble oligomers were in the supernatant. The supernatant was diluted 10-200-fold for experiments.
- Methods vary depends on the downstream applications.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Mol Med Rep. 2021 Apr;23(4):1-12.
- Yonsei Med J. 2019 Jul;60(7):640-650.

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REFERENCES

- [1]. Solntseva EI, et al. Impact of amyloid- β peptide (1-42) on voltage-gated ion currents in molluscan neurons. Bull Exp Biol Med. 2011 Oct;151(6):671-4.
- [2]. Barucker C, et al. Nuclear translocation uncovers the amyloid peptide A β 42 as a regulator of gene transcription. J Biol Chem. 2014 Jul 18;289(29):20182-91.
- [3]. Stefania Sabella, et al. Capillary electrophoresis studies on the aggregation process of beta-amyloid 1-42 and 1-40 peptides. Electrophoresis. 2004 Oct;25(18-19):3186-94.

Caution: Product has not been fully validated for medical applications. For research use only.

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