

β-Amyloid (1-42), human TFA

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:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year

DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA (TFA salt)

* The compound is unstable in solutions, freshly prepared is recommended.

SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (7.20 mM; Need ultrasonic)					
		Solvent Concentration	Mass			
	Preparing Stock Solutions			1 mg	5 mg	10 mg
		1 mM		0.2161 mL	1.0804 mL	2.1607 mL
		5 mM		0.0432 mL	0.2161 mL	0.4321 mL
	10 mM		---	---	---	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> 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 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 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.

Note:

The aggregation form is unstable in the solution, it is recommended to use it immediately.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

β -Amyloid (1-42), human TFA can be used in animal modeling to construct Alzheimer's disease models.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Eur J Med Chem. 15 December 2022, 114841.
- Aging. 2021 Jun 9;13(11):15569-15579.
- Front Aging Neurosci. 2022 Apr 25;14:890134.
- J Alzheimers Dis. 2022;85(1):167-178.
- Mol Med Rep. 2021 Apr;23(4):1-12.

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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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