

β-Amyloid (1-40) (TFA)

Cat. No.:	HY-P0265A
Molecular Formula:	C ₁₉₄ H ₂₉₅ N ₅₃ O ₅₈ S.C ₂ HF ₃ O ₂
Molecular Weight:	4443.84
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 <small>DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV (TFA salt)</small>
Sequence Shortening:	DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV
Target:	Amyloid-β
Pathway:	Neuronal Signaling
Storage:	Sealed storage, away from moisture and light Powder -80°C 2 years -20°C 1 year

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

SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (22.50 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		0.2250 mL	1.1252 mL	2.2503 mL
	5 mM		0.0450 mL	0.2250 mL	0.4501 mL
	10 mM		0.0225 mL	0.1125 mL	0.2250 mL

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

BIOLOGICAL ACTIVITY

Description

β-Amyloid (1-40) TFA is a primary protein in plaques found in the brains of patients with Alzheimer's disease^[1].

In Vitro

β-Amyloid (1-40) and (1-42) are major components of senile plaque amyloids, are physiological peptides present in the brain, cerebrospinal fluid (CSF) and plasma. The levels of CSF β-Amyloid (1-40) and (1-42) show a U-shaped natural course in normal aging^[1].

The further aggregation of β-Amyloid (1-40)

1. Solid Aβ 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

- Adv Sci (Weinh). 2023 Nov 10:e2303402.
- Nano Res. 28 April 2022.
- Appl Surf Sci. 2023 Sep 9, 158427.
- Nanomaterials. 2022 Nov 16;12(22):4031.
- Evid Based Complement Alternat Med. 2022 Sep 9;2022:3100621.

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REFERENCES

[1]. Shoji M, et al. Cerebrospinal fluid Abeta40 and Abeta42: natural course and clinical usefulness. Front Biosci. 2002 Apr 1;7:d997-1006.

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

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