

## β-Amyloid (29-40)

<b>Cat. No.:</b>	HY-P1522
<b>CAS No.:</b>	184865-04-1
<b>Molecular Formula:</b>	C <sub>49</sub> H <sub>88</sub> N <sub>12</sub> O <sub>13</sub> S
<b>Molecular Weight:</b>	1085.36
<b>Sequence:</b>	Gly-Ala-Ile-Ile-Gly-Leu-Met-Val-Gly-Gly-Val-Val
<b>Sequence Shortening:</b>	GAIIGLMVGGVV
<b>Target:</b>	Amyloid-β
<b>Pathway:</b>	Neuronal Signaling
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	β-Amyloid (29-40) is a fragment of Amyloid-β peptide.
<b>IC<sub>50</sub> &amp; Target</b>	Amyloid-β <sup>[1]</sup>
<b>In Vitro</b>	<p>β-Amyloid (29-40) is a fragment of Amyloid-β peptide, insoluble in water, acetonitrile or in a mixture of both in different ratios. Cationic arginine residues is introduced at β-Amyloid (29-40) C-terminus to solubilize β-Amyloid (29-40) and introduce cationicity in this Aβ stretch to enable it to interact with the negatively charged membrane of bacteria. β-Amyloid (29-40) variants shows antimicrobial effect<sup>[1]</sup>. Single chain variable fragments (scFv's) binds the 17-28 region of Abeta and effectively inhibits in vitro aggregation of Abeta, but binding the carboxyl-terminal region of β-Amyloid (29-40) does not inhibit aggregation<sup>[2]</sup>.</p> <p>β-Amyloid Aggregation Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. The HFIP was removed by evaporation, and the resulting peptide was stored as a film at -20 or -80 °C.</li> <li>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.</li> <li>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.</li> </ol> <p>Methods vary depends on the downstream applications.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### REFERENCES

[1]. Hariouh MK, et al. A short non-cytotoxic antimicrobial peptide designed from Aβ29-40 adopts a nanostructure and shows in vivo anti-endotoxin activity. *Chem Commun (Camb)*. 2017 Dec 5;53(97):13079-13082.

[2]. Liu R, et al. Single chain variable fragments against beta-amyloid (Abeta) can inhibit Abeta aggregation and prevent abeta-induced neurotoxicity. *Biochemistry*. 2004 Jun 8;43(22):6959-67.

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

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