β-Amyloid (1-42), rat TFA

Cat. No.: HY-P1388A
Molecular Formula: C₁₉₉H₃₀₇N₅₃O₅₉S.C₂HF₃O₂
Molecular Weight: 4532.04
Sequence: Asp-Ala-Glu-Phe-Gly-His-Asp-Ser-Gly-Phe-Glu-Val-Arg-His-Gln-Lys-Leu-Val-Phe
Sequence Shortening: DAEFGHDSGFEVRHQKLVFAEDVGSNKGAIIGLMVGGVIA
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

SOLVENT & SOLUBILITY

In Vitro
DMSO : 100 mg/mL (22.07 mM; Need ultrasonic)
H₂O : < 0.1 mg/mL (insoluble)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td></td>
<td>1 mM</td>
<td>0.2207 mL</td>
<td>1.1033 mL</td>
<td>2.2065 mL</td>
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<tr>
<td></td>
<td>5 mM</td>
<td>0.0441 mL</td>
<td>0.2207 mL</td>
<td>0.4413 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.0221 mL</td>
<td>0.1103 mL</td>
<td>0.2207 mL</td>
</tr>
</tbody>
</table>

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

In Vivo
1. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (0.55 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
β-Amyloid (1-42), rat TFA is a 42-aa peptide, shows cytotoxic effect on acute hippocampal slices, and used in the research of Alzheimer’s disease.

IC₅₀ & Target
Amyloid-β[1]

In Vitro
β-Amyloid (1-42), rat shows cytotoxic effect on the hippocampal slices at 20 μM[1]. β-Amyloid (1-42), rat causes morphological changes in NGF-induced PC12 cells, induces formed cell processes to retract in differentiated cells and
affect the expression of exons 2/3 in both undifferentiated and differentiated cells[2].

**PROTOCOL**

**Cell Assay [1]**

After treating the hippocampal slices with 20 μM β-Amyloid (1-42) for 4 h, supernatant is replaced by fresh H-ACSF/3 (0.9 mL/chamber) to which 0.1 mL MTT stock solution (5 mg/mL H-ACSF/3) is added (MTT final concentration: 0.5 mg/mL). The chamber is left to rest for 15 min without carboxygenation. To stop further reduction of MTT, the medium (H-ACSF/3) is removed. The slices are transferred into 96-well plate, then pure DMSO (100 µL/slice/well) is added for dissolving formazane from the slices. (30 min in a 96-well plate). Then 70 µL DMSO solution from each slice (well) is transferred into another 96-well plate. The optical density (OD) of the dissolved formazane is measured at 550 and 620 nm[1].

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

**REFERENCES**
