β-Amyloid (1-42), rat

Cat. No.:	HY-P1388
CAS No.:	166090-74-0
Molecular Formula:	$C_{199}H_{307}N_{53}O_{59}S$
Molecular Weight:	4418.02
Sequence:	Asp-Ala-Glu-Phe-Gly-His-Asp-Ser-Gly-Phe-Glu-Val-Arg-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:	DAEFGHDSGFEVRHQKLVFFAEDVGSNKGAIIGLMVGGVVIA
Target:	Amyloid-β
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

Description	β-Amyloid (1-42), rat is a 42-aa peptide, shows cytotoxic effect on acute hippocampal slices, and used in the research of Alzheimer's disease.
IC_{50} & 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-ASCF/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

[1]. Mozes E, et al. A novel method for the rapid determination of beta-amyloid toxicity on acute hippocampal slices using MTT and LDH assays. Brain Res Bull. 2012 Apr 10;87(6):521-5.

[2]. Lagunes T, et al. Abeta(1-42) induces abnormal alternative splicing of tau exons 2/3 in NGF-induced PC12 cells. An Acad Bras Cienc. 2014 Dec;86(4):1927-34.

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