COSMO BIO CO., LTD.
Inspiration for Life Science

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Catalog No. PMC-AK13-COS

TAMRA-β-amyloid (1-42)

Introduction

This product is β-amyloid labelled N-terminus with fluorophore Carboxytetramethylrhodamine (TAMRA). Amyloid-beta (Aβ) is peptides of 36–43 amino acids that are crucially involved in Alzheimer's disease as the main component of the amyloid plaques found in the brains of Alzheimer patients. It is useful for research of neurodegenerative disease such as Alzheimer's disease.

Components

Product Name	Size	Quantity	Storage Conditions	Stability
TAMRA-β-amyloid (1-42)	0.5mg/tube	1	-20°C and protect from light	1 year

***Shipping ： 4°C**

Product Information

Tagged Site	N-terminus
Molecular Mass	4975.57
Purity (HPLC)	>80%
Appearance	powder
Excitation/Emission	547nm/574nm

Materials required but not provided

- Dimethyl sulfoxide (DMSO)
- DMEM (phenol red free)
- Fluorescence microscope

Precautions

1. **Read the instructions carefully before use.**
2. **Wear eye protectors and gloves**

Protocol

A) For the unaggregation protocol

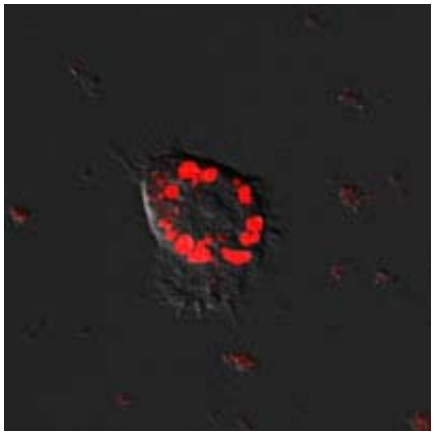
1) The peptide is first resupended in DMSO 40μL to a concentration of 2.5mM.
2) Vortex the solution at moderate speed. Dissolved peptide can be stored at 4°C for 4 weeks protected from light.
3) Dilute the peptide to 0.01-10μM with warmed culture medium.
4) Add the medium including peptide on the cell and culture at 37°C for 24h.

5) Remove the supernatant, wash with buffer and add the fresh medium.
6) Observe by fluorescence microscope.

B) For the oligomers protocol

1) The peptide is first resupended in DMSO 40μL to a concentration of 2.5mM.
2) Vortex the solution at moderate speed.
3) Dilute the peptide to 1:25 with DMEM (phenol red free) to a concentration of 100μM.
4) Oligomerize at 4°C for 24h. Oligomerized peptide can be stored at 4°C for 4 weeks protected from light.
5) Dilute the oligomerized peptide to 0.01-10μM with culture medium.
6) Add the medium including oligomerized peptide on the cell and culture at 37°C for 24h.
7) Remove the supernatant, wash with buffer and add the fresh medium.
8) Observe by fluorescence microscope.

Fig.1 Phagocytosed TAMRA-β-amyloid by microglia cell clone



Fluorescence detection using 10μM oligomerized TAMRA-β-amyloid on microglia cell clone (Ra2) detected by confocal laser scanning microscope.

References

1) Dahlgren, Karie N, Arlene M Manelli, W Blaine Stine, Lorinda K Baker, Grant a Krafft, and Mary Jo LaDu, 'Oligomeric and Fibrillar Species of Amyloid-beta Peptides Differentially Affect Neuronal Viability.', The Journal of biological chemistry, 277 (2002), 32046–53

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TOYO EKIMAE BLDG. 2-20, TOYO 2-CHOME, KOTO-KU, TOKYO 135-0016 JAPAN
TEL: (81)3-5632-9617 / FAX: (81)3-5632-9618 / e-mail: export@cosmobio.co.jp / URL:www.cosmobio.com