



PRODUCT DATA SHEET

β -Amyloid Peptide (1-40), Human

SKU: TDA-1201-100

Product Details

Product Name: β -Amyloid Peptide (1-40), Human,

Synonyms: A β 40, A β (1-40), Amyloid Beta (1-40)

Catalog Number: TDA-1201-100

Organism: *Homo Sapiens*, Human

CAS Number: 131438-79-4

Package Size: 100ug in 1mg/ml concentration

Conjugates: No tag

Amino Acid Sequence: DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVV

Purity: >97%

Protein Length/Size: 40 amino acid/4329 Da

Preparation: TFA (Synthetic)

Storage Conditions & Shipment

Physical State: powder

Product Format/Shipped: Ambient

Storage Temperature: -80°C for long term storage; avoid freeze/thaw cycle

Safety Precaution

PLEASE READ BEFORE HANDLING ANY FROZEN VIALS. Please wear appropriate Personal Protection Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling

Description

β -Amyloid peptide ($A\beta_{40}$) is a 40-amino-acid peptide that plays a central role in the pathogenesis of Alzheimer's disease (AD) and age-associated Down syndrome. In individuals with Down syndrome, trisomy of chromosome 21 leads to increased expression of amyloid precursor protein (APP), thereby promoting enhanced production and accumulation of $A\beta$ peptides.

$A\beta_{40}$ is generated through sequential proteolytic processing of the type I transmembrane protein APP, which is encoded by the APP gene located on human chromosome 21. Cleavage by β -secretase followed by γ -secretase produces multiple $A\beta$ species of varying lengths, among which $A\beta_{40}$ is the most abundant form.

Structurally, the $A\beta$ peptide is derived from the extracellular N-terminal region of APP and extends into the transmembrane domain. The C-terminal region of $A\beta_{40}$ is hydrophobic, conferring a strong propensity for self-association and aggregation into soluble oligomers, protofibrils, and mature amyloid fibrils. These aggregated species are widely implicated in neuronal dysfunction and disease progression in Alzheimer's pathology.

Applications

1. Alzheimer's disease mechanism studies;
2. Amyloid aggregation and fibrillization assays;
3. Neurotoxicity and structure–function analyses;
4. Screening of $A\beta$ -targeting inhibitors, antibodies, or therapeutic candidates;

Disclaimers

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.