



PRODUCT DATA SHEET

β -Amyloid Peptide (1-42), Human

SKU: TDA-1204-100

Product Details

Product Name: β -Amyloid Peptide (1-42), Human,

Synonyms: A β 40, A β (1-42), Amyloid Beta (1-42)

Catalog Number: TDA-1204-100

Organism: *Homo Sapiens*, Human

CAS Number: 107761-42-2

Package Size: 100ug in 1mg/ml concentration

Conjugates: No tag

Amino Acid Sequence: DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA

Purity: >97%

Protein Length/Size: 42 amino acid/4514 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 (1–42) (A β 42) is a 42-amino-acid peptide that is widely recognized as a key pathogenic species in Alzheimer's disease (AD). Compared with shorter A β isoforms, A β 42 exhibits markedly enhanced neurotoxicity and aggregation propensity, and is considered a principal initiator of amyloid plaque formation in the AD brain.

A β 42 is produced by sequential proteolytic cleavage of the amyloid precursor protein (APP), a type I transmembrane protein encoded by the APP gene on human chromosome 21. Following initial β -secretase cleavage, γ -secretase processing at alternative C-terminal sites generates multiple A β species, of which A β 42 represents a less abundant but highly pathogenic form.

Structurally, A β 42 contains two additional hydrophobic residues at the C-terminus relative to A β 40. These residues significantly increase β -sheet formation, molecular self-association, and fibril stability. As a result, A β 42 rapidly assembles into soluble oligomers, protofibrils, and mature amyloid fibrils, species that are strongly associated with synaptic dysfunction, neuronal toxicity, and disease progression.

Applications

1. Alzheimer's disease pathogenesis and amyloid cascade studies;
2. A β oligomerization and fibril formation assays;
3. Neurotoxicity and synaptic impairment models;
4. Screening and characterization of A β 42-targeting antibodies, inhibitors, and 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.