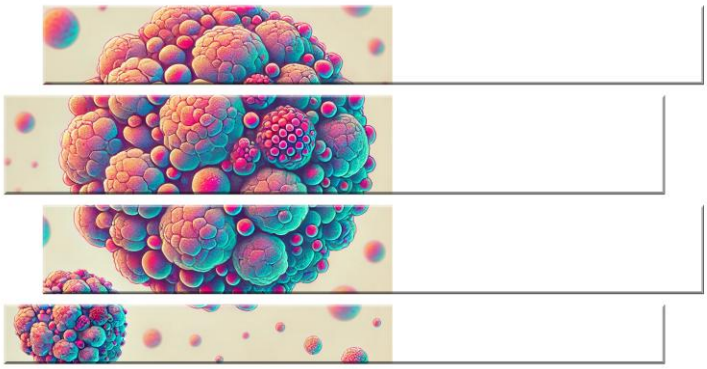


TriDix Bio
INNOVATING DRUG DISCOVERY

PRODUCT DATA SHEET

Amyloid Beta 1-42 oligomer

SKU: TDA-1205-100

Product Details

Product Name: Amyloid Beta 1-42 Oligomers

Synonyms:

Catalog Number: TDA-1205-100

Organism: *Homo Sapiens*, Human

CAS Number: 131438-79-4

Package Size: 100ug in 1mg/ml concentration

Conjugates: No tag

Amino Acid Sequence: DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVIA

Purity: >95% by SDS-PAGE

Protein Length/Size: 42 amino acid/4514 Da

Preparation: TFA (Synthetic)

Storage Conditions & Shipment

Storage Buffer: Phosphate buffer (PB) pH 7.4

Product Format/Shipped: Cryopreserved / Dry ice

Storage Temperature: -80℃ 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*

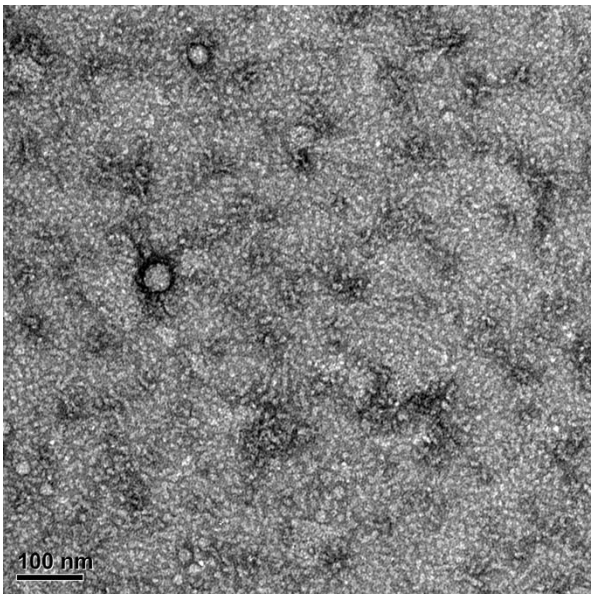
Description

Amyloid Beta 1–42 (Aβ42) oligomers are soluble, non-fibrillar assemblies of the 42-amino-acid β-amyloid peptide and are widely regarded as the most neurotoxic Aβ species implicated in Alzheimer's disease (AD) pathogenesis. Compared with monomeric and fibrillar forms, Aβ42 oligomers exhibit enhanced biological activity and are strongly associated with synaptic dysfunction and neuronal impairment.

Aβ42 oligomers are generated through controlled in vitro assembly of monomeric Aβ42 under carefully defined conditions to yield low- to mid-order soluble aggregates. These oligomeric species are structurally and conformationally distinct from both monomers and mature amyloid fibrils, displaying increased β-sheet content, surface hydrophobicity, and dynamic heterogeneity.

Functionally, Aβ42 oligomers interfere with synaptic signaling, disrupt membrane integrity, and activate downstream neurotoxic pathways. Due to their high pathogenic relevance, they serve as critical tools for investigating early amyloid toxicity, oligomer-specific mechanisms, and therapeutic intervention strategies targeting soluble Aβ species.

Product Data



TEM of Aβ42 oligomers

Applications

1. Mechanistic studies of Alzheimer's disease–related neurotoxicity;

2. Aβ oligomer formation, stability, and structural analysis;

3. Synaptic dysfunction and neuronal signaling assays;

4. Screening and validation of oligomer-specific antibodies, inhibitors, and drug candidates;

5. Comparative studies of Aβ40 vs Aβ42 aggregation behavior;

Protocols

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.