

## PRODUCT DATA SHEET

### Alpha Synuclein A53E Mutant Monomers

SKU: TDA-1105m-100

#### Product Details

**Product Name:** Alpha Synuclein A53E Mutant Monomers

**Catalog Number:** TDA-1105m-100

**Organism:** *Homo Sapiens*, Human

**Nature:** Recombinant

**Package Size:** 100ug in 1mg/ml concentration

**Conjugates:** No tag

**Protein Length/Size:** Full Length

**Expression System:** E. coli

**Amino Acid Sequence:** MDVFMKGLSK AKEGVVAAAE KTKQGVAAEA GKTKEGVLYV  
GSKTKEGVVH GVETVAEKT EQVTNVGGAV VTGVTAVAQK TVEGAGSIAA ATGFVKKDDL  
GKNEEGAPQE GILEDMPVDP DNEAYEMPSE EGYQDYEPEA

**Purity:** >95% by SDS-PAGE

#### Storage Conditions & Shipment

**Storage Buffer:** PBS pH 7.4

**Product Format/Shipped:** Cryopreserved / Dry ice

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

#### Safety Precaution

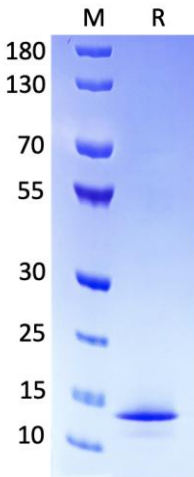
**PLEASE READ BEFORE HANDLING ANY FROZEN VIALS.** Please wear appropriate Personal Protection Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling

## Description

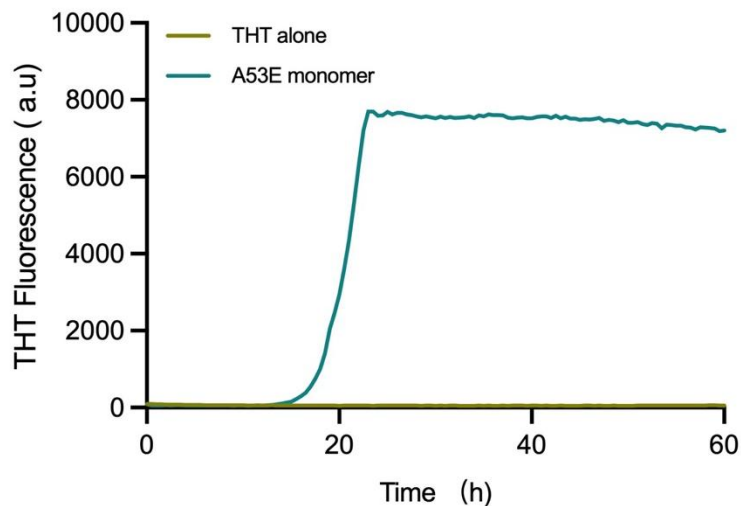
Alpha-synuclein (SNCA) is predominantly expressed in the brain and is enriched at presynaptic nerve terminals. It is also localized to mitochondria in several brain regions, including the olfactory bulb, hippocampus, striatum, and thalamus. Alpha-synuclein interacts with tubulin and has been proposed to function as a microtubule-associated protein, contributing to synaptic and cytoskeletal regulation.

Pathologically, fibrillar alpha-synuclein aggregates are a major component of Lewy bodies in Parkinson's disease and constitute a significant non-amyloid- $\beta$  component of amyloid plaques in Alzheimer's disease. The accumulation of alpha-synuclein- and ubiquitin-containing inclusions in vulnerable neuronal populations is a defining feature of Parkinson's disease-associated neurodegeneration.

## Product Data



Alpha-synuclein monomer analyzed by SDS-PAGE under reducing conditions. The gel was stained with Coomassie Brilliant Blue overnight. Protein purity was estimated to be >90% based on comparison with a pre-stained protein molecular weight marker.



Thioflavin T (ThT) aggregation kinetics of  $\alpha$ -synuclein A53E monomer.

Time-dependent ThT fluorescence of recombinant  $\alpha$ -synuclein A53E monomer (teal) displaying a sigmoidal aggregation profile with a defined lag phase followed by rapid fibril growth and a stable high-fluorescence plateau, consistent with the formation of  $\beta$ -sheet-rich amyloid fibrils. ThT alone (olive) served as a negative control and remained at baseline fluorescence throughout the assay. Fluorescence intensity is shown in arbitrary units (a.u.).

## Applications

SDS-PAGE, WB, In vivo assay, In vitro assay

## 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.*