

Datasheet for ABIN6952300  
**SNCA Protein (Ala53Thr-Mutant)**



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2 Images

## Overview

Quantity:	100 µg
Target:	SNCA
Protein Characteristics:	Ala53Thr-Mutant
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	SDS-PAGE (SDS), Western Blotting (WB), In vitro Assay (in vitro), In vivo Studies (in vivo)

## Product Details

Sequence:	MDVFMKGLSK AKEGVVAAAE KTKQGVAEAA GKTKEGVLYV GSKTKEGVVH GVTTVAEKTKEQVTNVGGAV VTGVTAVAQK TVEGAGSIAA ATGFVKKDQL GKNEEGAPQE GILEDMPVDPDNEAYEMPSE EGYQDYEPEA
Specificity:	~14.46 kDa
Characteristics:	Active Human Recombinant A53T Mutant Alpha Synuclein Protein Monomer
Purification:	Ion-exchange Purified
Biological Activity Comment:	100 µM A53T alpha synuclein protein monomer (SPR-325) seeded with 10 nM A53T alpha synuclein protein PFF (SPR-326) in 25 µM Thioflavin T (PBS pH 7.4, 100 µl reaction volume) generated a fluorescence intensity of 28 000 Relative Fluorescence Units after incubation at 37°C with shaking at 600 rpm for 56 hours. Fluorescence was measured by excitation at 450 nm and emission at 485 nm on a Molecular Devices Gemini XPS microplate reader.

## Target Details

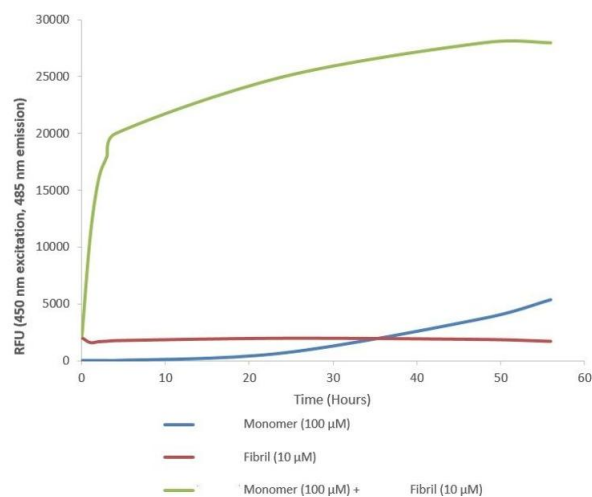
Target:	SNCA
Alternative Name:	Alpha Synuclein ( <a href="#">SNCA Products</a> )
Background:	<p>Alpha-Synuclein (SNCA) is expressed predominantly in the brain, where it is concentrated in presynaptic nerve terminals. Alpha-synuclein is highly expressed in the mitochondria of the olfactory bulb, hippocampus, striatum and thalamus. Functionally, it has been shown to significantly interact with tubulin, and may serve as a potential microtubule-associated protein. It has also been found to be essential for normal development of the cognitive functions, inactivation may lead to impaired spatial learning and working memory. SNCA fibrillar aggregates represent the major non A-beta component of Alzheimers disease amyloid plaque, and a major component of Lewy body inclusions, and Parkinson's disease. Parkinson's disease (PD) is a common neurodegenerative disorder characterized by the progressive accumulation in selected neurons of protein inclusions containing alpha-synuclein and ubiquitin. The A53T mutation is a missense point mutation where alanine is replaced by threonine at the 53rd amino acid. This mutation has been linked to early-onset Parkinson's Disease and increased rates of alpha synuclein fibrillization.</p>
Gene ID:	6622
NCBI Accession:	<a href="#">NP_000336</a>
Pathways:	<a href="#">Synaptic Membrane</a> , <a href="#">Regulation of G-Protein Coupled Receptor Protein Signaling</a> , <a href="#">Positive Regulation of Endopeptidase Activity</a> , <a href="#">Regulation of Carbohydrate Metabolic Process</a> , <a href="#">Platelet-derived growth Factor Receptor Signaling</a> , <a href="#">Negative Regulation of Transporter Activity</a> , <a href="#">Regulation of long-term Neuronal Synaptic Plasticity</a>

## Application Details

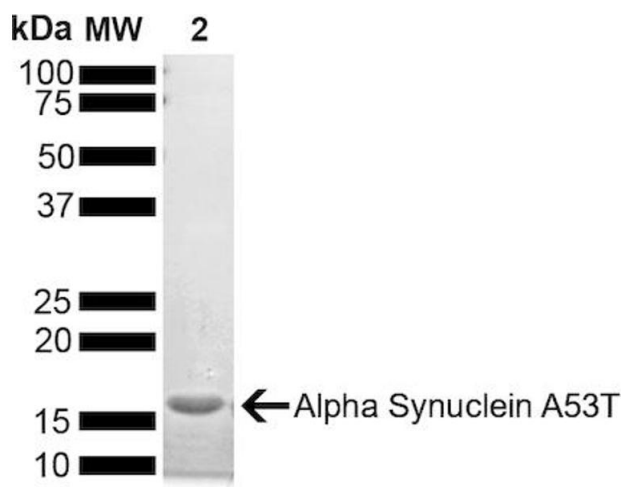
Comment:	Certified >95% pure using SDS-PAGE analysis.
Restrictions:	For Research Use only

## Handling

Concentration:	Lot specific
Buffer:	PBS pH 7.4
Storage:	-80 °C



**Image 1.** Thioflavin T is a fluorescent dye that binds to beta sheet-rich structures such as those in alpha synuclein fibrils. Upon binding, the emission spectrum of the dye experiences a red-shift and increased fluorescence intensity. Thioflavin T emission curves show a limited increase in fluorescence (correlated to alpha synuclein aggregation) over time in A53T alpha synuclein monomers (ABIN6952300, ABIN6952301 and ABIN6952302). A much greater increase in fluorescence is seen when 100 uM monomer (ABIN6952300, ABIN6952301 and ABIN6952302) is combined with 10 nM of fibrils (ABIN6952300, ABIN6952301 and ABIN6952302) as the fibrils seed the formation of new fibrils from the pool of active monomers. Thioflavin T ex = 450 nm, em = 485 nm.



**SDS-PAGE**

**Image 2.** SDS-PAGE of ~14 kDa A53T Alpha Synuclein Monomer (ABIN6952300, ABIN6952301 and ABIN6952302)