

Datasheet for ABIN5065824
SNCA Protein (full length)

8 Images

[Go to Product page](#)

Overview

Quantity:	100 µg
Target:	SNCA
Protein Characteristics:	full length
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 GVATVAEKT EQVTNVGGAV VTGVTAVAQK TVEGAGSIAA ATGFVKKDQL GKNEEGAPQE GILEDMPVDP DNEAYEMPSE EGYQDYEPEA
Specificity:	~14.46 kDa
Purification:	Ion-exchange Purified
Purity:	92% pure using SDS-PAGE analysis.
Biological Activity Comment:	Does not induce Lewy body inclusion formation in Sprague-Dawley rat primary hippocampal neurons. Thioflavin T emission curve shows only a small increase in fluorescence (indicative of alpha synuclein aggregation) when Type 2 alpha synuclein PFFs (SPR-317) are combined with alpha synuclein monomers (SPR-321 or SPR-316). Certain biological activities in other neuronal cells cannot be ruled out. Researchers should test compatibility prior to use.

Target Details

Target:	SNCA
Alternative Name:	Alpha Synuclein (SNCA Products)
Background:	Alpha-Synuclein (SNCA) is expressed predominantly in the brain, where it is concentrated in presynaptic nerve terminals (1). Alpha-synuclein is highly expressed in the mitochondria of the olfactory bulb, hippocampus, striatum and thalamus (2). Functionally, it has been shown to significantly interact with tubulin (3), 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 (4). 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 (5, 6).
Molecular Weight:	14.46 kDa
Gene ID:	6622
NCBI Accession:	NP_000336
UniProt:	P37840
Pathways:	Synaptic Membrane , Regulation of G-Protein Coupled Receptor Protein Signaling , Positive Regulation of Endopeptidase Activity , Regulation of Carbohydrate Metabolic Process , Platelet-derived growth Factor Receptor Signaling , Negative Regulation of Transporter Activity , Regulation of long-term Neuronal Synaptic Plasticity

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Certified 92% pure using SDS-PAGE analysis.
Restrictions:	For Research Use only

Handling

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

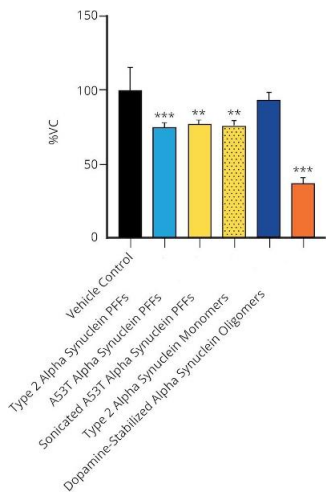
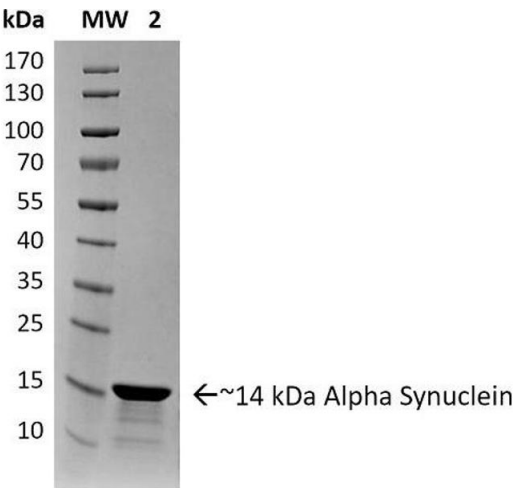


Image 1. Evaluation of a-syn toxicity on primary mouse cortical neurons. Mitochondrial dehydrogenase activity reduces yellow MTT to dark blue formazan crystals, a reaction catalyzed in living cells. Cell viability was assessed with an MTT assay and displayed as % of vehicle control (VC). Data are presented as bar graphs and standard deviation. For statistical analysis One-way ANOVA followed by Bonferroni post-hoc test (vs VC) was used. ** p<0.01, *** p<0.001. Treatment with Type 2 PFFs reduced cell viability (p<0.001). Data courtesy of QPS.



SDS-PAGE

Image 2. SDS-PAGE of ~14 kDa Human Recombinant Alpha Synuclein Protein Aggregate (Control) . Lane 1: Molecular Weight Ladder (MW). Lane 2: Alpha Synuclein Protein Aggregate .

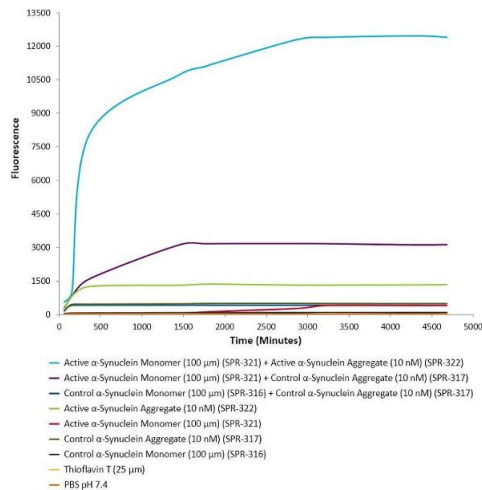


Image 3. Active alpha synuclein aggregate seeds the formation of new alpha Synuclein aggregates from the pool of active alpha Synuclein monomers . Thioflavin T is a fluorescent dye that binds to beta sheet-rich structures, such as those in alpha Synuclein aggregates. Upon binding, the emission spectrum of the dye experiences a red-shift, and increased fluorescence intensity. Thioflavin T emission curves show increased fluorescence (correlated to alpha Synuclein protein aggregation) over time when 10 nM of active alpha Synuclein aggregate is combined with 100 μM of active alpha Synuclein monomer, as compared to when 100 μM of active alpha Synuclein monomer is combined with 10 nM of active alpha Synuclein aggregate.

with 10 nM of control alpha Synuclein aggregate , or 100 μ M of control alpha Synuclein monomer is combined with 10 nM of control alpha Synuclein aggregate . Thioflavin T ex = 450 nm, em = 485 nm.

Please check the [product details page](#) for more images. Overall 8 images are available for ABIN5065824.