

Datasheet for ABIN5065829
SNCA Protein (full length)[Go to Product page](#)

10 Images

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:	>95% pure using SDS-PAGE analysis.
Biological Activity Comment:	Endogenous alpha-synuclein phosphorylation. 100 µM alpha synuclein protein monomer (SPR-321) seeded with 10 nM alpha synuclein protein PFF (SPR-322) in 25 µM Thioflavin T (PBS pH 7.4, 100 µl reaction volume) generated a fluorescence intensity of 13,000 Relative Fluorescence Units after incubation at 37°C with shaking at 600 rpm. Fluorescence was measured by excitation at 450 nm and emission at 485 nm on a Molecular Devices Gemini XPS microplate

Product Details

reader.

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 >95% pure using SDS-PAGE analysis.

Restrictions: For Research Use only

Handling

Concentration: Lot specific

Buffer: PBS

Storage: -80 °C

Images

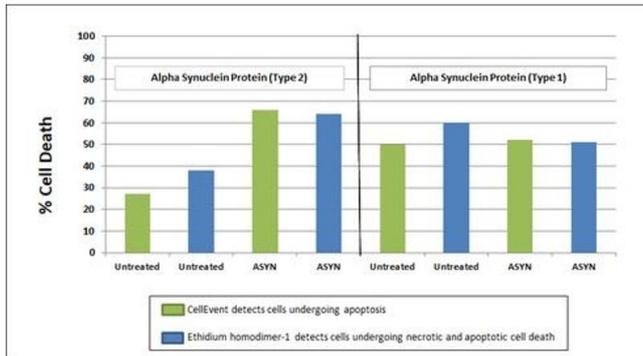
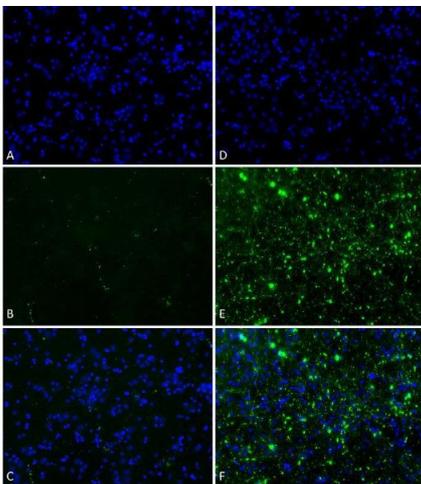


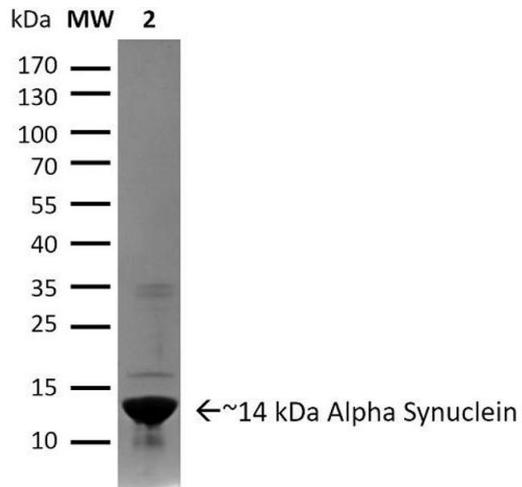
Image 1. Toxicity results comparing Active Human Recombinant Alpha Synuclein Pre-formed Fibrils (Type 2) (Catalog No. ABIN5065829, ABIN5065830 and ABIN5564165) and Active Human Recombinant Alpha Synuclein Pre-formed Fibrils (Type 1) (Catalog No. ABIN5065829, ABIN5065830 and ABIN5564165). Data was graphed after live cell imaging results were obtained using the following procedure: After 8 days in vitro, primary rat mixed cortical neuron cells were washed with 1X PBS and treated with 500 µg/mL of Type 1 and Type 2 Alpha Synuclein Proteins for 20 hours at 37°C. Following treatments, cells were washed with 2X PBS and incubated with a staining solution (2.0 µM Cell Event + 2.5 µM Ethidium homodimer + 2.5 µg/mL Hoechst 33342 in sterile HBSS) for 30 minutes at 37°C. The addition of the Type 2 Alpha Synuclein Proteins resulted in a significant increase in cell death.



Immunofluorescence (fixed cells)

Image 2. Primary rat hippocampal neurons show lewy body inclusion formation when treated with active Alpha Synuclein Protein Aggregate at 4 µg/ml (D-F), but not when treated with control Alpha Synuclein Protein Aggregate at 4 µg/ml (A-C). Tissue: Primary hippocampal neurons. Species: Sprague-Dawley rat. Fixation: 4% formaldehyde from PFA. Primary Antibody: Mouse anti-pSer129 Antibody at 1:1000 24 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:700 for 1 hours at RT. Counterstain: Hoechst

(blue) nuclear stain at 1:4000 for 1 hour at RT. Localization: Lewy body inclusions. Magnification: 20x.



SDS-PAGE

Image 3. SDS-PAGE of ~14 kDa Active Human Recombinant Alpha Synuclein Protein Aggregate . Lane 1: Molecular Weight Ladder (MW). Lane 2: Active Alpha Synuclein Protein Aggregate .

Please check the [product details page](#) for more images. Overall 10 images are available for ABIN5065829.