

Alpha Synuclein Active Protein | SNCA active protein

Alpha Synuclein Protein

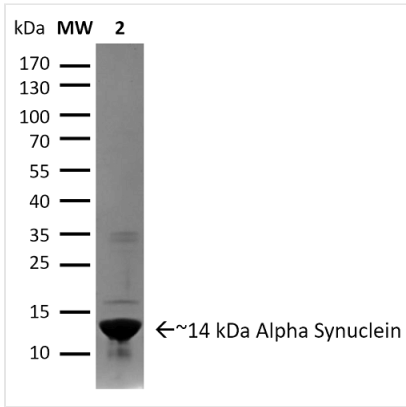
CATALOG # AAA253923	HOST E Coli	APPLICATIONS SDS-Page, Western Blot
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PRODUCT SYNONYMS

Alpha Synuclein; Alpha Synuclein Protein; Active Human Recombinant Alpha Synuclein Protein Aggregates (Pre-formed Fibrils); Active Alpha synuclein pre-formed fibrils; Active Alpha synuclein aggregates; Active Alpha synuclein protein aggregates; Active Alpha-synuclein protein; Non-A beta component of AD amyloid protein; Non-A4 component of amyloid precursor protein; NACP protein; SNCA protein; PARK1 protein; SYN protein; Parkinson disease familial 1 Protein; Active Alpha synuclein protein seed; SNCA active protein

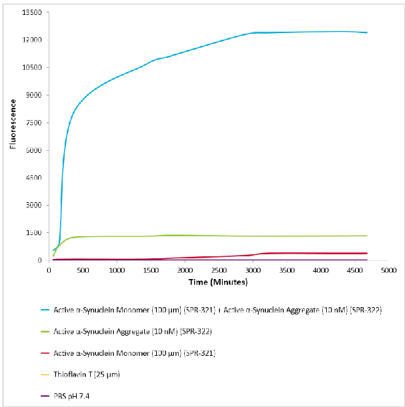
PRODUCT SPECIFICATIONS

Host	E Coli
Specificity	~14.46 kDa
Purity/Purification	>95% Ion-exchange Purified
Sequence	MDVFMKGLSK AKEGVVAAAE KTKQGVAEAA GKTKEGVLYV GSKTKEGVVH GVATVAEKTQ EQVTNVGGAV VTGVTAVAQK TVEGAGSIAA ATGFVKKQDL GKNEEGAPQE GILEDMPVDP DNEAYEMPSE EGYQDYEPEA
Sequence Length	Full Length
Applicable Applications for SNCA active protein	Invitro Assay, SDS-PAGE, WB (Western Blot)
Species	Human
Target	Alpha Synuclein
Cellular Localization	Cytoplasm; Membrane; Nucleus
Biological Activity	Endogenous alpha-synuclein phosphorylation. 100 uM alpha synuclein protein monomer seeded with 10 nM alpha synuclein protein aggregate in 25 uM Thioflavin T (PBS pH 7.4, 100 ul reaction volume) generated a fluorescence intensity of 13,000 Relative Fluorescence Units after incubation at 37 degree C with shaking at 600 rpm for 24 hours. Fluorescence was measured by excitation at 450 nm and emission at 485 nm on a Molecular Devices Gemini XPS microplate reader.
Tag Information	No tag
Preparation and Storage	Store at -80 degree C.



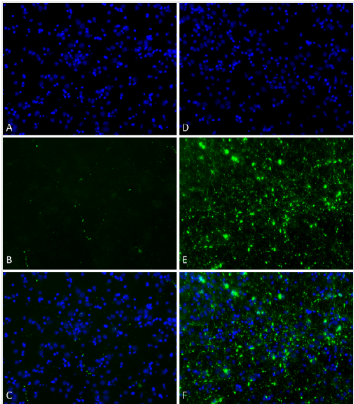
SDS-PAGE

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.



Application Data

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 μ M of active alpha Synuclein monomer, as compared to active alpha Synuclein aggregate and active alpha Synuclein monomer alone. Thioflavin T ex = 450 nm, em = 485 nm.



Application Data

Primary rat hippocampal neurons show lewy body inclusion formation when treated with active Alpha Synuclein Protein Aggregate at 4 μ g/ml (D-F), but not when treated with control Alpha Synuclein Protein Aggregate at 4 μ g/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 degree 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.

ADDITIONAL INFORMATION

Related Product Information for SNCA active protein	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).
Product Categories/Family for SNCA active protein	Protein; Neuroscience; Neurodegeneration; Alzheimer's Disease; Tangles & Tau; Neuroscience; Neurodegeneration; Parkinson's Disease; Synuclein

References	1. "Genetics Home Reference: SNCA". US National Library of Medicine. (2013). 2. Zhang L., et al. (2008) Brain Res. 1244: 40-52. 3. Alim M.A., et al. (2002) J Biol Chem. 277(3): 2112-2117. 4. Kokhan V.S., Afanasyeva M.A., Van'kin G. (2012) Behav. Brain. Res. 231(1): 226-230. 5. Spillantini M.G., et al. (1997) Nature. 388(6645): 839-840. 6. Mezey E., et al. (1998) Nat Med. 4(7): 755-757.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4507109
NCBI GeneID	6622
NCBI Accession #	NP_000336.1
NCBI GenBank Nucleotide #	NM_000345.3
UniProt Accession #	P37840; Q13701; Q4JHI3; Q6IAU6; A8K2A4
Molecular Weight	13,109 Da
NCBI Official Full Name	alpha-synuclein isoform NACP140
NCBI Official Synonym Full Names	synuclein alpha
NCBI Official Symbol	SNCA
NCBI Official Synonym Symbols	PD1; NACP; PARK1; PARK4
NCBI Protein Information	alpha-synuclein
UniProt Protein Name	Alpha-synuclein
UniProt Gene Name	SNCA
UniProt Synonym Gene Names	NACP; PARK1; NACP

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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 Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/alpha-synuclein/253923>