

# Product Datasheet

## Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein NBP2-54789-100ug

Unit Size: 1 x 100ug Vials

Store at -80C. Avoid freeze-thaw cycles.

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**NBP2-54789-100ug**

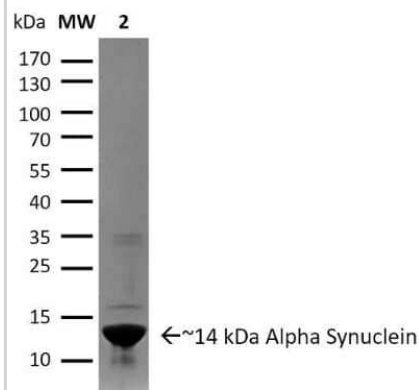
Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein

Product Information	
Unit Size	1 x 100ug Vials
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at -80C. Avoid freeze-thaw cycles.
Purity	Ion exchange chromatography
Buffer	PBS
Target Molecular Weight	14.46 kDa
Product Description	
Description	<p>An un-tagged full length Human biologically active Alpha-Synuclein recombinant protein aggregate (pre-formed fibrils, Type 1), NCBI Accession #: NP_000336.1.</p> <p><b>Source:</b> <i>E. coli</i></p> <p><b>Amino Acid Sequence:</b></p> <p>MDVFMKGLSKAKEGVVAAAEKTKQGVAEAAGKTKEGVLYVGSKTKEGVVHGV ATVAEKTKEQVTNVGGAVVTGVTAVAQKTVEGAGSIAAATGFVKKDQLGKNEE GAPQEGILEDMPVDPDNEAYEMPSEEGYQDYEPEA</p>
Gene ID	6622
Gene Symbol	SNCA
Species	Human
Details of Functionality	Endogenous alpha-synuclein phosphorylation. 100 uM alpha synuclein protein monomer (NBP2-54788) seeded with 10 uM alpha synuclein protein PFF (NBP2-54789) 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 degrees 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.
Product Application Details	
Applications	Western Blot, Electron Microscopy, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, In vitro assay, In vivo assay, SDS-Page, Bioactivity, Product Image
Recommended Dilutions	Western Blot 1:100-1:2000, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, In vitro assay, Electron Microscopy, In vivo assay, SDS-Page 1:100-1:2000, Bioactivity, Product Image

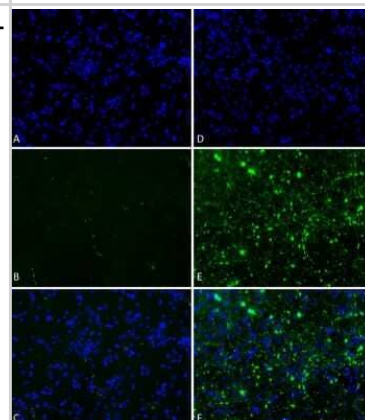


## Images

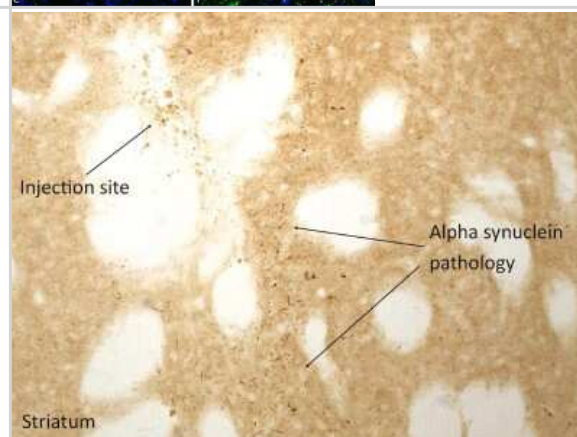
Western Blot: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - Lane 1: Molecular Weight Ladder (MW). Lane 2: Active Alpha Synuclein Protein Aggregate.



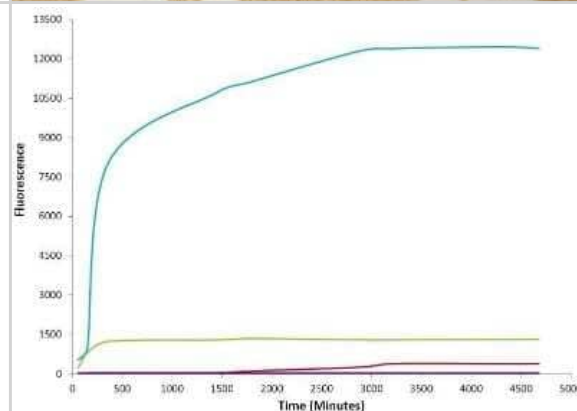
Immunocytochemistry/Immunofluorescence: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - Primary rat hippocampal neurons show lewy body inclusion formation when treated with active Alpha Synuclein Protein Aggregate at 4 ug/ml (D-F), but not when treated with control Alpha Synuclein Protein Aggregate at 4 ug/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 4C. 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.



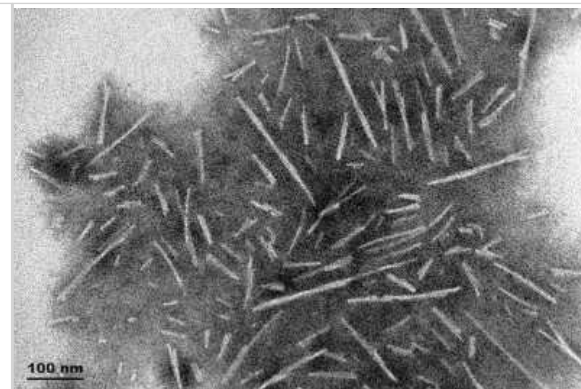
Immunohistochemistry: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - Immunohistochemistry analysis of rat brain injected with Type 1 human alpha synuclein PFFs (NBP2-54789). Species: Female Sprague-Dawley Rat. Rat was injected with 16g Type 1 human alpha synuclein PFFs (NBP2-54789) in each of 2 injection sites: AP+1.6, ML+2.4, DV-4.2 from skull; and AP-1.4, ML+0.2, DV-2.8 from skull. 30-days post-injection. Fixation: Saline perfusion followed by 4% PFA fixation for 48 hrs. Primary antibody: rabbit monoclonal anti-pSer129 alpha synuclein. Secondary Antibody: Biotin-SP Donkey Anti-Rabbit IgG (H+L) at 1:500 for 2 hours in cold room with shaking. ABC signal amplification, DAB staining. Magnification: 20X. Alpha synuclein pathology is seen in the striatum close to an injection site.



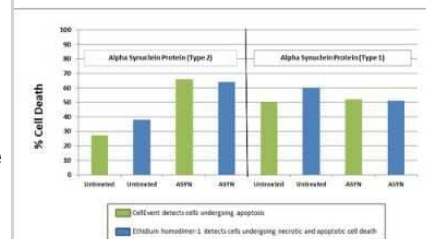
In vitro assay: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - Thioflavin T emission curves show increased fluorescence (correlated to alpha Synuclein protein aggregation) over time when 10 nM of active alpha Synuclein aggregate (NBP2-54789) is combined with 100 uM of active alpha Synuclein monomer (NBP2-54788), as compared to active alpha Synuclein aggregate (NBP2-54789) and active alpha Synuclein monomer (NBP2-54788) alone. Thioflavin T ex = 450 nm, em = 485 nm.



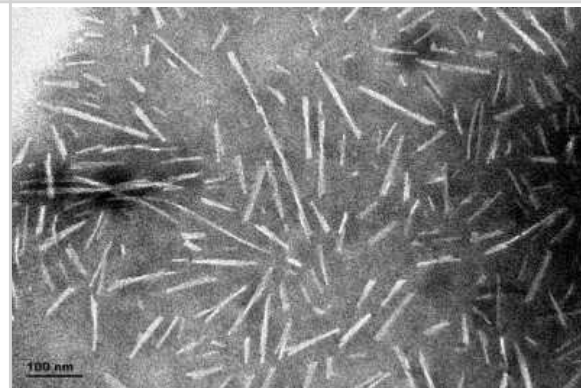
Electron Microscopy: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - TEM of Type 1 alpha-Synuclein Pre-formed Fibrils (PFFs) (NBP2-54789)



Product Image: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - Toxicity results comparing Active Human Recombinant alpha-Synuclein Pre-formed Fibrils (Type 2) and Active Human Recombinant alpha-Synuclein Pre-formed Fibrils (Type 1) (Catalog No. NBP2-54789). 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 g/ml of Type 1 and Type 2 alpha-Synuclein Proteins for 20 hours at 37C. Following treatments, cells were washed with 2X PBS and incubated with a staining solution (2.0 M Cell Event + 2.5 M Ethidium homodimer + 2.5 g/ml Hoechst 33342 in sterile HBSS) for 30 minutes at 37C. The addition of the Type 2 alpha-Synuclein Proteins resulted in a significant increase in cell death.



Electron Microscopy: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein [NBP2-54789] - TEM of Type 1 alpha-Synuclein Pre-formed Fibrils (PFFs) (NBP2-54789)





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### **Products Related to NBP2-54789-100ug**

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NBP2-54787-0.1mg	Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein
BC100-494	PINK1 Antibody - BSA Free
NBP2-15365	alpha-Synuclein Antibody
NB300-109	Tyrosine Hydroxylase Antibody

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