

# Product Datasheet

## Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein NBP2-54787-0.1mg

Unit Size: 0.1 mg

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

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**NBP2-54787-0.1mg**

Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein

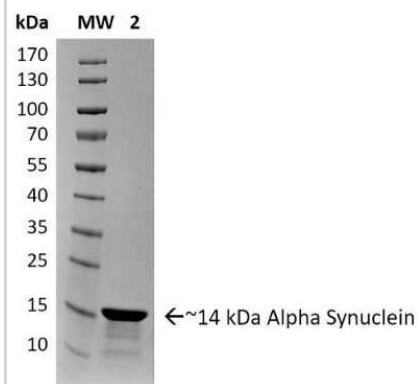
Product Information	
Unit Size	0.1 mg
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at -80C. Avoid freeze-thaw cycles.
Purity	Ion exchange chromatography
Buffer	PBS (pH 7.4)
Target Molecular Weight	14.46 kDa

Product Description	
Description	<p>An un-tagged full length Human Recombinant Alpha Synuclein recombinant protein aggregate (pre-formed fibrils, Type 2), NCBI Accession #: NP_000336.1</p> <p><b>Source:</b> <i>E. coli</i></p> <p><b>Amino Acid Sequence:</b>  MDVFMKGLSKAKEGVVAAAEKTKQGVAEAAGKTKEGVLYVGSKTKEGVVHGV  ATVAEKTKEQVTNVGGAVVTGVTAVAQKTVEGAGSIAAATGFVKKDQLGKNEE  GAPQEGILEDMPVDPDNEAYEMPSEEGYQDYEPEA</p>
Gene ID	6622
Gene Symbol	SNCA
Species	Human
Details of Functionality	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 (NBP2-54787) are combined with alpha synuclein monomers (NBP2-54788 or NBP2-54786). Certain biological activities in other neuronal cells cannot be ruled out. Researchers should test compatibility prior to use.

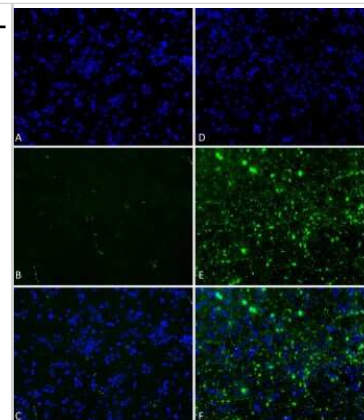
Product Application Details	
Applications	Western Blot, Electron Microscopy, Immunocytochemistry/Immunofluorescence, In vitro assay, In vivo assay, SDS-Page, Bioactivity, Product Image
Recommended Dilutions	Western Blot, Immunocytochemistry/Immunofluorescence, In vitro assay, Electron Microscopy, In vivo assay, SDS-Page, Bioactivity, Product Image

**Images**

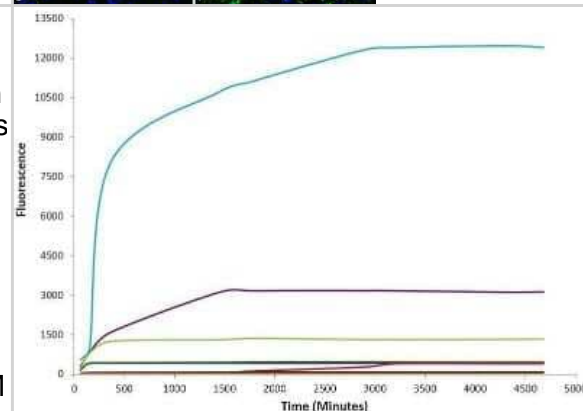
Western Blot: Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein [NBP2-54787] - Lane 1: Molecular Weight Ladder (MW). Lane 2: Alpha Synuclein Protein Aggregate



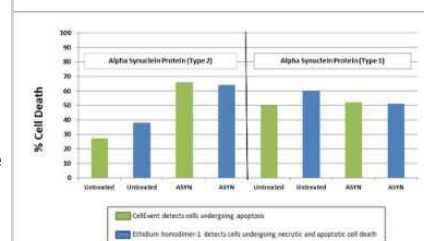
**Immunocytochemistry/Immunofluorescence:** Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein [NBP2-54787] - Primary rat hippocampal neurons show lewy body inclusion formation when treated with active Alpha Synuclein Protein Aggregate at 4 ug/ml (D-F), but not when treated with control Alpha Synuclein Protein Aggregate at 4 ug/ml (A-C). Tissue: Primary hippocampal neurons. Species: Sprague-Dawley rat. Fixation: 4% formaldehyde made 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.



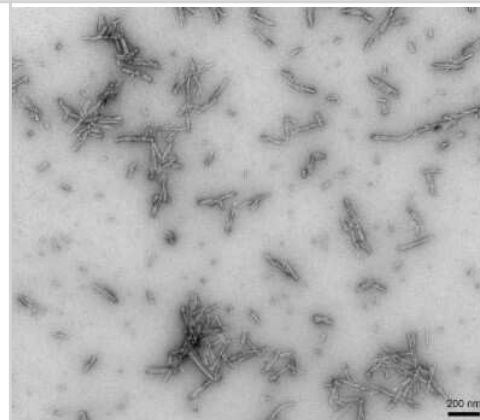
**In vitro assay:** Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein [NBP2-54787] - Thioflavin T is a fluorescent dye that binds to beta sheet-rich structures, such as those in alpha Synuclein aggregates. Upon binding, the emission spectrum of the dye experiences a red-shift, 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 (NBP2-54789) is combined with 100 uM of active alpha Synuclein monomer (NBP2-54788), as compared to when 100 uM of active alpha Synuclein monomer (NBP2-54788) is combined with 10 nM of control alpha Synuclein aggregate (NBP2-54787), or 100 uM of control alpha Synuclein monomer (NBP2-54786) is combined with 10 nM of control alpha Synuclein aggregate (NBP2-54787). Thioflavin T ex = 450 nm, em = 485 nm.



**Product Image:** Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 2) Protein [NBP2-54787] - Toxicity results comparing Active Human Recombinant alpha-Synuclein Pre-formed Fibrils (Type 2) (Catalog No. NBP2-54787) and Active Human Recombinant alpha-Synuclein Pre-formed Fibrils (Type 1). 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 2) Protein [NBP2-54787] - TEM of Type 2 alpha-Synuclein Pre-formed Fibrils (PFFs) (NBP2-54787)



## Publications

Fiolek TJ, Keel KL, Tepe JJ Fluspirilene Analogs Activate the 20S Proteasome and Overcome Proteasome Impairment by Intrinsically Disordered Protein Oligomers ACS chemical neuroscience 2021-04-21 [PMID: 33788542]



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### **Products Related to NBP2-54787-0.1mg**

NBP2-54789-100ug	Recombinant Human alpha-Synuclein Active, Pre-formed Fibrils, (Type 1) Protein
BC100-494	PINK1 Antibody - BSA Free
NBP2-15365	alpha-Synuclein Antibody
NB300-109	Tyrosine Hydroxylase Antibody

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