Alpha Synuclein S129A Mutant Pre-formed Fibrils

Human Recombinant Alpha Synuclein S129A Mutant Pre-formed Fibrils
Catalog No. SPR-506

StressMarq Biosciences INC.

Discovery through Partnership | Excellence through Quality

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EAGLE BIOSCIENCES

Product Name

Alpha Synuclein S129A Mutant Pre-formed Fibrils

Description

Human Recombinant Alpha Synuclein S129A Mutant Pre-formed Fibrils

Applications

WB, SDS PAGE, In vitro Assay

Concentration

Lot/batch specific. See included datasheet.

Conjugates

No tag

Nature

Recombinant

Species

Human

Expression System

E. coli

Amino Acid Sequence

MDVFMKGLSKAKEGVVAAAEKTKQGVAEAAGKTKEGVLYVGSKTKEGVVHGVATVAEKTKEQVTNVGGAVVTGVTAVAQKTV
EGAGSIAAATGFVKKDQLGKNEEGAPQEGILEDMPVDPDNEAYEMPAEEGYQDYEPEA

Purity

>95%

Other Resources

Protein Length

Full length (1 - 140 aa)

Field Of Use

Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

Properties

Storage Buffer

1X PBS pH7.4

Storage Temperature

-80ºC

Shipping Temperature

Dry Ice. Shipping note: Product will be shipped separately from other products purchased in the same order.

Purification

Ion-exchange Purified

Cite This Product

Human Recombinant Alpha Synuclein S129A Mutant Pre-formed Fibrils (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-506)

Certificate Of Analysis

Protein certified >95% pure on SDS-PAGE & Nanodrop analysis, low endotoxin

Biological Description

Alternative Names

Alpha synuclein protein, Alpha-synuclein protein, Non-A beta component of AD amyloid protein, Non-A4 component of amyloid precursor protein, NACP protein, SNCA protein, NACP protein, PARK1 protein, SYN protein, Parkinson's disease familial 1 Protein, Alpha Synuclein S129A

Research Areas

Alzheimer's Disease, Neurodegeneration, Neuroscience, Parkinson's Disease, Synuclein, Tangles & Tau, Multiple System Atrophy

Swiss Prot

P37840-1

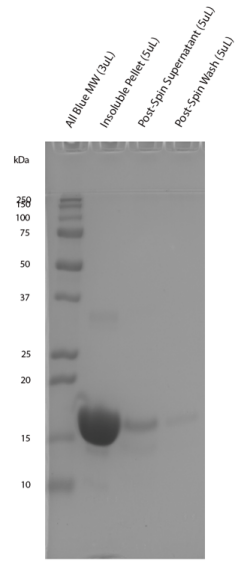
Scientific Background

Elevated levels of phosphoserine 129 (pS129) on alpha-synuclein has long been considered a hallmark of Parkinson’s disease and other synucleinopathies, where up to 90% of alpha-synuclein deposition in Lewy Bodies contains pS129, compared to ≤4% in normal brains (reviewed in [1]). Further, pS129 was recently shown to function as a physiological regulator of neuronal activity (2). Alpha-synuclein S129A monomers and fibrils cannot be phosphorylated at position 129, and therefore can be utilized to study phospho-S129-independent biology and pathology. Further, this material can be used to confirm induction of endogenous pS129 pathology in disease models.

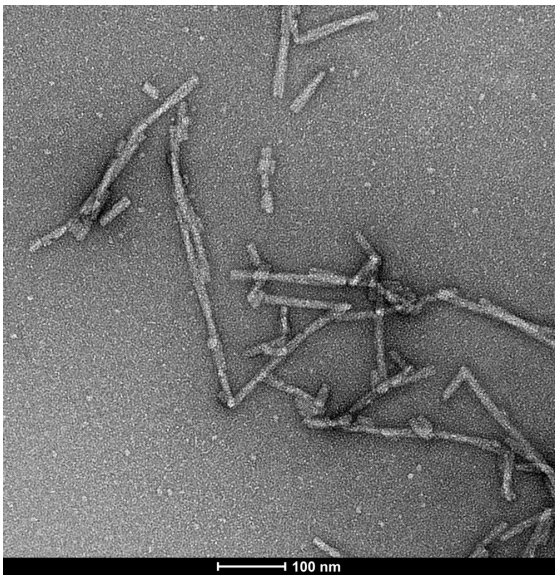
References

1. Xu, Deng and Qing. 2015. The phosphorylation of α-synuclein: development and implication for the mechanism and therapy of the Parkinson's disease. Journal of Neurochemistry. https://doi.org/10.1111/jnc.13234
2. Ramalingam et al. 2023. Dynamic physiological α-synuclein S129 phosphorylation is driven by neuronal activity. NPJ Parkinsons Dis. doi: 10.1038/s41531-023-00444-w.

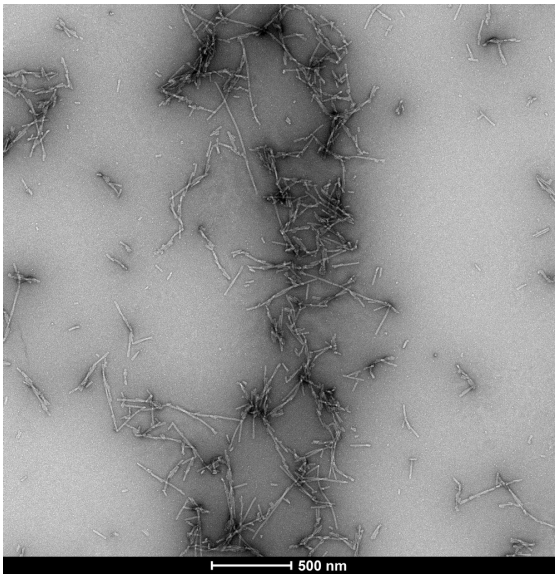
Product Images



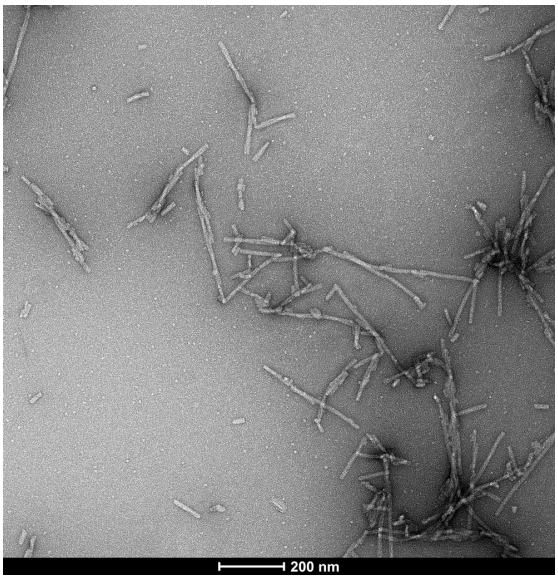
Sedimentation assay of human alpha synuclein S129A fibrils (SPR-506) showing >90% of material is insoluble when spun at 20,000 xg. Lane 1: Biorad All Blue Standards (3uL), Lanes 2-4: human alpha synuclein S129A pre-formed fibrils (10ug) supernatant, wash and pellet.



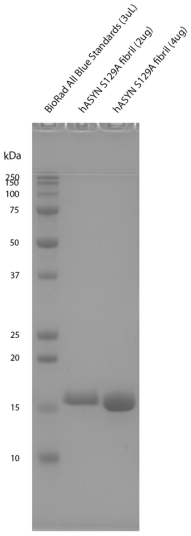
TEM of human alpha synuclein S129A fibrils (SPR-506). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 100 nm.



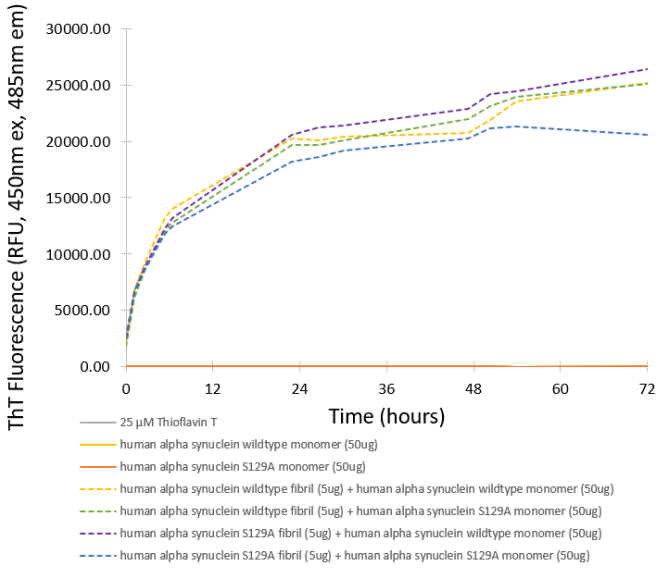
TEM of human alpha synuclein S129A fibrils (SPR-506). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 500 nm.



TEM of human alpha synuclein S129A fibrils (SPR-506). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 200 nm.



SDS-PAGE of purified human alpha synuclein S129A fibrils (SPR-506) on a 12% Bis-Tris Gel. 2ug and 4ug of total protein were loaded into the respective lanes. Electrophoresis was run at 200V for 45 minutes with fixed voltage using 1X MES running buffer.



Seeding activity of human alpha synuclein S129A mutant measured by ThT in vitro. Human alpha synuclein S129A fibrils (SPR-506) will rapidly seed both wild-type and S129A alpha synuclein monomers (SPR-505) with comparable activity to wild-type fibrils.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.