

## Alpha Synuclein Protein

Human Recombinant Alpha Synuclein Protein Monomer (Control)  
Catalog No. SPR-316



### Overview

#### Product Name

Alpha Synuclein Protein

#### Description

Human Recombinant Alpha Synuclein Protein Monomer (Control)

#### Applications

WB, SDS-PAGE, In vivo assay, In vitro assay

#### Concentration

Lot/batch specific. See included datasheet.

#### Conjugates

No tag

#### Nature

Recombinant

#### Species

Human

#### Expression System

E. coli

#### Amino Acid Sequence

MDVFMKGLSKAKEGVVAAAETKQGVAAEAGTKEGVLYVGSKTKEGVVHGVATVAEKTKEQVTNVGGAVVTGVTAVAQKTVEGAGSIAAATGFVKKDKLGKNEEGAPQEGILEDMPVDP  
DNEAYEMPSEEGYQDYEPEA

#### Purity

92%

#### Protein Length

Full Length

### Properties

#### Storage Buffer

0.2µm filtered solution in 20mM tris, 150mM NaCl pH7.5

#### Storage Temperature

-80°C

#### Shipping Temperature

Blue Ice or 4°C

#### Purification

Ion-exchange Purified

#### Specificity

~14.46 kDa

#### Cite This Product

Human Recombinant Alpha Synuclein Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-316)

#### Certificate Of Analysis

Certified 92% pure using SDS-PAGE analysis.

### Biological Description

#### Alternative Names

Alpha synuclein monomer, Alpha-synuclein monomer, Alpha synuclein protein monomer, Alpha synuclein monomer, 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, Alpha synuclein monomers, SYN protein, Parkison disease familial 1 Protein

#### Research Areas

Alzheimer's Disease, Neurodegeneration, Neuroscience, Parkinson's Disease

### Cellular Localization

Cytoplasm, Membrane, Nucleus

### Accession Number

NP\_000336.1

### Gene ID

6622

### Swiss Prot

P37840

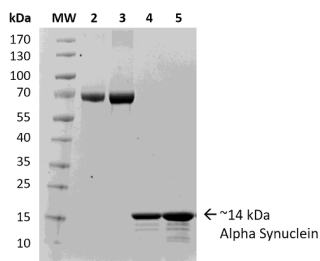
### Scientific Background

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

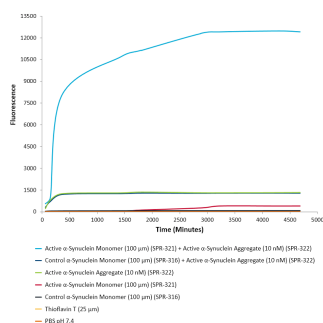
### References

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.

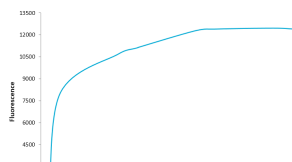
### Product Images

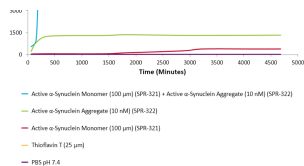


SDS-PAGE of ~14 kDa Human Recombinant Alpha Synuclein Protein Monomer (Control) (SPR-316). Lane 1: Molecular Weight Ladder (MW). Lane 2: BSA (2.5 µg). Lane 3: BSA (5 µg). Lane 4: Alpha Synuclein Protein Monomer (2.5 µg) (SPR-316). Lane 5: Alpha Synuclein Protein Monomer (5 µg) (SPR-316).

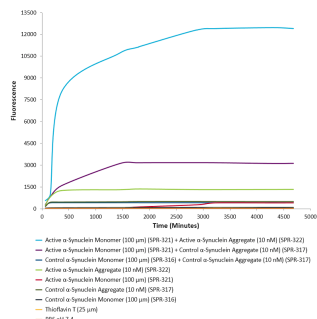


Active alpha synuclein aggregate (SPR-322) seeds the formation of new alpha Synuclein aggregates from the pool of active alpha Synuclein monomers (SPR-321). Thioflavin T is a fluorescent dye that binds to beta sheet-rich structures, such as those in alpha Synuclein aggregates. Upon binding, the emission 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 (SPR-322) is combined with 100 µM of active alpha Synuclein monomer (SPR-321), as compared to when 100 µM of control alpha Synuclein monomer (SPR-316) is combined with 10 nM of active alpha Synuclein aggregate (SPR-322). Thioflavin T  $\lambda_{ex}$  = 450 nm,  $\lambda_{em}$  = 485 nm.

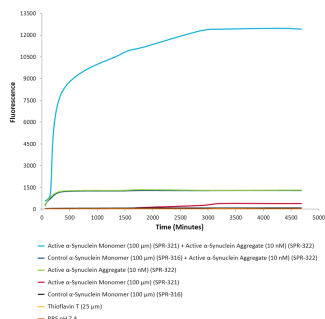




Active alpha synuclein aggregate (SPR-322) seeds the formation of new alpha Synuclein aggregates from the pool of active alpha Synuclein monomers (SPR-321). Thioflavin T is a fluorescent dye that binds to beta sheet-rich structures, such as those in alpha Synuclein aggregates. Upon binding, the emission 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 (SPR-322) is combined with 100 µM of active alpha Synuclein monomer (SPR-321), as compared to active alpha Synuclein aggregate (SPR-322) and active alpha Synuclein monomer (SPR-321) alone. Thioflavin T  $\lambda_{ex}$  = 450 nm,  $\lambda_{em}$  = 485 nm.



Active alpha synuclein aggregate (SPR-322) seeds the formation of new alpha Synuclein aggregates from the pool of active alpha Synuclein monomers (SPR-321). 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 (SPR-322) is combined with 100 µM of active alpha Synuclein monomer (SPR-321), as compared to when 100 µM of active alpha Synuclein monomer (SPR-321) is combined with 10 nM of control alpha Synuclein aggregate (SPR-317), or 100 µM of control alpha Synuclein monomer (SPR-316) is combined with 10 nM of control alpha Synuclein aggregate (SPR-317). Thioflavin T  $\lambda_{ex}$  = 450 nm,  $\lambda_{em}$  = 485 nm.



Active alpha synuclein aggregate (SPR-322) seeds the formation of new alpha Synuclein aggregates from the pool of active alpha Synuclein monomers (SPR-321). 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 (SPR-322) is combined with 100 µM of active alpha Synuclein monomer (SPR-321), as compared to when 100 µM of control alpha Synuclein monomer (SPR-316) is combined with 10 nM of active alpha Synuclein aggregate (SPR-322), or active alpha Synuclein aggregate (SPR-322) and active alpha Synuclein monomer (SPR-321) alone. Thioflavin T  $\lambda_{ex}$  = 450 nm,  $\lambda_{em}$  = 485 nm.

**Product Citations (0)**

Currently there are no citations for this product.

**Reviews**

There are no reviews yet.