

Product Specification Sheet
Synuclein Recombinant protein

Cat. # SYN-195-R

Human Alpha Synuclein Recombinant mutant protein (1-95aa)

SIZE: 50 ug

Parkinson's disease (**PD**) is a common neurodegenerative disorder with a lifetime incidence of approximately 2 percent; the clinical manifestations of this neurodegenerative disorder include resting tremor, muscular rigidity, bradykinesia, and postural instability. A relatively specific pathological feature accompanying the neuronal degeneration is an intracytoplasmic inclusion body, known as the **Lewy body**. A mutation was identified in the α -**synuclein** gene, which codes for a presynaptic protein thought to be involved in neuronal plasticity, this mutation may cause a conformational change that renders α -synuclein more prone to self aggregation and deposition in Lewy bodies, which finally leads to oxidative stress and misfolding of α -synuclein.

Parkin gene, mutations in this gene are reported in early autosomal-recessive form of PD, however these mutations do not degenerate **Lewy bodies**. The Parkin gene product (**Parkin**) is involved in protein degradation as a ubiquitin protein ligase, the known substrates of Parkin include Pael-R (Parkin-associated endothelin receptor-like receptor), Ubiquitination of Pael-R by Parkin leads to its degradation in the proteasome, however failure to ubiquitinate it leads to death of neuron.

The synuclein exists in 3 isoform α -**syn** (**chrM 4q21**), a 140aa protein, implicated in pathogenesis of PD and related neurodegenerative disorders, it is mainly expressed in brain specifically in neuronal cell bodies and synapses. The 134 aa **β -syn** (**chrM 5q35**) is homologous to 14 kDa bovine phosphonoprotein 14; SCNB has been shown to be highly expressed in the substantia nigra of the brain. Recently a new isoform termed **γ -synuclein** (SNCG) or breast cancer gene 1 (BCG1) has been cloned (human 127 aa (chrM 10q23), rat/mouse 123 aa). Higher levels of expression of SNCG have been reported in advanced breast carcinomas. All three synuclein show ~40% identity.

Source of Protein

A mutant of alpha-synuclein that contains only the amino acid residues 1-95. Purity: >95% by SDS-PAGE (Mol.wt 9.3kD). It is provided in 20 mM Tris-HCl, 100 mM NaCl, pH 7.5 in liquid or lyophilized. The lyophilized products should be reconstituted at 100-1 mg/ml in water or a desired buffer at a given volume and lightly vortex and mix for 15 min at room temp). It can then be used or aliquoted for storage in small aliquots at -70oC or below.

General References:

Park, S.M et al 2002, Blood 100, 2506; Kruger .R et al 1998, Nat Genet. 18, 106.

*This product is for *in vitro* research use only.

Related Items

Catalog#	ProdDescription
SD61140-R	Human Alpha Synuclein Recombinant deletion mutant protein (61-140aa)
SD6195-R	Human Alpha Synuclein Recombinant deletion mutant protein (61-95aa)
SD96140-R	Human Alpha Synuclein Recombinant deletion mutant protein (96-140aa)
SYN11-A	Anti-Human Synuclein-alpha IgG # 1, aff pure
SYN11-C	Human Alpha Synuclein protein W. blot +ve control
SYN11-P	Human Synuclein-alpha Control/blocking peptide #1
SYN11-R-100	Recombinant purified Human Alpha Synuclein protein (140 aa full length, wild type)
SYN12-A	Anti-Rat Synuclein-alpha IgG # 2, aff pure
SYN12-P	Rat Synuclein-alpha Control/blocking peptide # 2
SYN12-R-100	Recombinant purified Mouse Alpha Synuclein protein (140 aa full length, wild type)
SYN13-A	Anti-Human Synuclein-Beta IgG # 1, aff pure
SYN13-C	Purified recombinant Human beta Synuclein protein W. blot +ve Control
SYN13-P	Human Synuclein-Beta Control/blocking peptide #1
SYN14-A	Anti-Mouse Synuclein-gamma IgG # 1, aff pure
SYN14-P	Mouse Synuclein-gamma Control/blocking peptide # 1
SYN15-A	Anti-Human Synuclein-gamma IgG # 2, aff pure
SYN15-C	Human Gamma Synuclein protein W. blot +ve control
SYN15-P	Human Synuclein-gamma Control/blocking peptide # 2
SYN-160-R	Recombinant purified Human Alpha Synuclein mutant protein (1-60 aa)
SYN16-M	Mouse Monoclonal Anti-Human Synuclein-alpha protein IgG, aff pure
SYN-195-R	Recombinant purified Human Alpha Synuclein mutant protein (1-95 aa)
SYN21-M	Mouse Monoclonal Anti-Human/mouse/rat Synuclein-beta protein IgG, aff pure
SYN-25-R	Recombinant Purified Human beta Synuclein protein full length (1-134 aa)
SYN31-M	Mouse Monoclonal Anti-Human Synuclein-gamma protein IgG, aff pure
SYN-35-R	Recombinant Purified Human Gamma Synuclein protein full length (1-127 aa)
SYN-36-R	Recombinant Purified Mouse Gamma Synuclein protein full length
SYN-61140-R	Recombinant purified Human Alpha Synuclein mutant protein (61-140 aa)
SYN-96140-R	Recombinant purified Human Alpha Synuclein mutant protein (Delta NAC/96-140 aa)
SYN-A3053T-R	Human Alpha Synuclein A30P/A53T Recombinant double mutant protein
SYN-A30P-R	Human Alpha Synuclein (A30P) Recombinant protein
SYN-A53T-R	Human Alpha Synuclein (A53T) Recombinant protein
SYN-E46K-R	Recombinant purified Human Alpha Synuclein (E46K) mutant protein
SYN-195-R	110714A

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