

Product Specification Sheet

Beta-Synuclein Control peptide and Recombinant protein

Cat. # SYN-25R

Human beta SYN Recombinant protein

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 phosphonuroprotein 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 synucleins show ~40% identity.

Source and Storage

Human beta synuclein recombinant protein (134-aa protein, 14.28 Kda) was expressed and in E. coli and purified (>95% by SDS-PAGE). It is provided in 10 mM Tris , pH 6.2 in liquid (100 ug/100 ul) or lyophilized. The lyophilized products should be reconstituted (Add 100 ml 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.

Suggested Usage

ELISA: coat at 1-10 ug/ml
Western blot: 100-500 ng protein/well (mol wt ~15 kda)

General References: Hashimoto, M (2001) Neuron 32, 213; Jakes, R (1994) FEBS Letters, 345, 27.

*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
SYN25-R rev 110714A

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