ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Recombinant Gamma-Synuclein protein

Cat. # SYN-35-R Recombinant Human Gamma Synuclein protein **SIZE**: 50 ug
FORM: Soln Lyophilized

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 phosphoneuroprotein 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.

Human **Gamma synuclein** recombinant protein, an acidic neuronal protein of 127aa. It is up regulated in the majority of late-stage breast and ovarian cancers, it promotes cancer cell survival and inhibits stress and chemotherapy drug induced apoptosis by modulating MAP kinase pathways.

Source and Storage

Human Gamma synuclein protein (127-aa) was expressed in in E. coli and purified (>95%). Purified protein migrates as ~15-16 kda band in SDS-PAGE (reduced). It is provided in PBS, pH 7.5 in liquid (100 ug/100 ul) or lyophilized. The lyophilized products should be reconstituted at 0.1-1 mg/ml (Add 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.

This product is suitable for ELISA standards or Western blot. Biological activity of the material is not tested.

General References:

Kim. J (1997) Mo. Cells 7, 78; Paik, S.R (1997) Arch Biochem. Biophys, 344, 325, Jakes. R. 1994, FEBS Lett. 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

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