α-Synuclein E46K human recombinant, expressed in *E. coli* N-terminal histidine tagged

Catalog Number: S4447
Storage Temperature: −20 °C

**Synonyms:** non A4 component of amyloid precursor; NACP (Non-Amyloid component of senile plaques precursor protein); Non-A-beta component of AD Amyloid; PARK1; PARK4; PD1

**Product Description**

α-Synuclein is a 140 amino acid protein (19-20 kDa, apparent molecular weight) encoded by a simple gene consisting of six exons on human chromosome 4. The physiological role of α-synuclein is not clear. In the search for its function, it was found that α-synuclein induces polymerization of tubulin into microtubules. In addition, α-synuclein was found to function in the modulation of dopamine transporter function, regulating the synaptic tone of dopamine. Disruption of this function can ultimately lead to neurodegeneration of nerve terminals. α-Synuclein is highly abundant in presynaptic terminals and is a major component of Lewy bodies (LBs). LBs are neuronal cytoplasmic inclusions that are found in diverse neurodegenerative disorders. The deposition of α-synuclein as fibrillary aggregates in neurons or glial cells is a hallmark lesion in a subset of neurodegenerative disorders. These disorders include Parkinson’s disease (PD), dementia with Lewy bodies (filamentous inclusions), Lewy body variant of Alzheimer’s disease, and multiple system atrophy. Familial parkinsonism and dementia with cortical and subcortical Lewy bodies were found to be associated with a 14,460 Da mutated form of α-synuclein. This mutation is a 188G-A transition resulting in a Glu46-to-Lys (E46K) substitution in the amino-terminal region of the protein. Among the familial mutations of α-synuclein in PD, E46K has the greatest potential to aggregate.

**Reagent**

Supplied as a white lyophilized solid.

Purity: ≥90% (SDS-PAGE).

**Preparation Instructions**

Reconstitute the product in 0.5 mL water (~1 mg/mL).

**Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

**Storage/Stability**

Shipped on dry ice. Recommended storage −20 °C. Stable for at least 2 years.

Store the reconstituted solution in working aliquots at −20 °C. Stable for at least 1 year.

**References**


KAA,CS,PHC 08/07-1