

**DATA SHEET**

**Product Name:** Alpha-Synuclein, A53T Mutant

**Catalog #:** S-1002

**Source:** Recombinant. A DNA sequence encoding the human alpha-synuclein, A53T mutant sequence was expressed in E. coli

**Molecular Mass:** 14,490 Da theoretical

**Protein Purity:** >95% by SDS-PAGE and Mass Spec.

**Counter Ion:** 20mM Tris-HCl, 100mM NaCl pH 7.4

**Supplied As:** White lyophilized powder

**Resuspension:** Resuspend in water at conc. of .1-1 mg/ml. Recommended to briefly centrifuge to ensure full resuspension of product.

**Storage:** -20°C

**Description:** Alpha-Synuclein ( $\alpha$ -Synuclein) is a 14 kD (140 amino acids) acidic presynaptic protein and is a major component of Parkinson's Disease (PD) aggregates.  $\alpha$ -Synuclein is implicated in the pathogenesis of PD and related neurodegenerative disorders.  $\alpha$ -Synuclein also accumulates in the brains of sporadic PD patients as a major component of Lewy bodies, which are intraneuronal cytoplasmic inclusions characteristic of PD.  $\alpha$ -Synuclein appears to associate with other proteins that aggregate and is found in beta-amyloid plaques and neuritic tangles in Alzheimer's disease<sup>5</sup>. rPeptide offers a wide array of synuclein products, including fragments, mutants, preformed fibrils, and labeled versions in addition to the wild-type protein. A point mutant (A53T) of alpha-synuclein gene that has been linked to autosomal dominant early onset Parkinson's Disease (PD).

**References:**

1. Conway, K., et al., (2000) *Biochemistry*, *39*: 2552
2. Jakes, R., et al., (1994) *FEBS Letters*, *345*: 27
3. Masliah, E., et al., (2001) *Proc. Natl. Acad. Sci., USA*, *98*: 12245
4. Ueda, K., et al., (1993) *Proc. Natl. Acad. Sci., USA*, *90*: 11282
5. Grozdanov, V., et al., (2019) *Ann Neurol*, *86(4)*: 593-606

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