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Product Information

b-Synuclein

human, recombinant, expressed in *E. coli*

Catalog Number: **S5571**

Storage Temperature: -20°C

Synonym: SNCB

Product Description

Synucleins (α , β , γ -synoretin) are a family of small, highly conserved proteins expressed primarily in neurons and in certain tumors.^{1,2}

β -Synuclein is an acidic neuronal protein of 134 amino acids - 14,287 Dalton. This member of the synuclein family lacks the non-amyloidogenic component (NAC) domain that appears to be responsible for the aggregating properties of α -synuclein. β -Synuclein is therefore considered to be a non-amyloidogenic homolog of α -synuclein. It was postulated that β -synuclein could act as a physiological inhibitor of α -synuclein aggregation and that it might protect the central nervous system from the neurotoxic effects of α -synuclein. The mechanisms of β -synuclein neuroprotection might involve direct interaction between β -synuclein and AKT, and suggest that this signaling pathway could be a therapeutic target for neurological conditions associated with Parkinson's disease and α -synuclein aggregation.^{3,4}

Purity: $\geq 90\%$ (SDS-PAGE)

Reagent

Supplied as a lyophilized solid.

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

The product is shipped on dry ice and stored at -20°C .

Reconstitute the product at ~ 1 mg/mL in water; 500 $\mu\text{g}/0.5$ ml. Store the reconstituted solution in working aliquots at -20°C . The reconstituted product is stable for at least 1 year when properly stored.

References:

1. Lavedan, C., The synuclein family. *Genome Res.*, **8**, 871-880 (1998).
2. George J.M., The synucleins. *Genome Biol.*, **3**, 1-8 (2002).
3. Hashimoto, M., et.al., β -Synuclein regulates Akt activity in neuronal cells. A possible mechanism for neuroprotection in Parkinson's disease. *J. Biol. Chem.*, **279**, 23622-23629 (2004).
4. Hashimoto, M., et.al., β -Synuclein Inhibits α -Synuclein aggregation: a possible role as an anti-Parkinsonian factor., *Neuron*, **32**, 213-223 (2001).

EB,MCT,PHC 03/06-1

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