

Product Information Sheet

Product Name: Recombinant Human β-Synuclein (1-134)

Catalog Number: AS-55458-100, AS-55458-500, AS-55458-1000

Lot Number: See label on the vial

Amount/size: 100 μg, 500 μg, 1000 μg

Source: The sequence (Accession # NP 003076)) corresponding to the human β-synuclein along

with a 6x His tag was expressed in E. coli.

Purity: Greater than 90% as determined by SDS-PAGE.

Endotoxin (EU/µg): Less than 1 EU per 1 µg of the protein as determined by Limulus Amebocyte Lysate (LAL)

quantitative kinetic assay.

Storage: Purified human β-synuclein is supplied as sterile and frozen at 1 mg/ml in the following buffer: 20

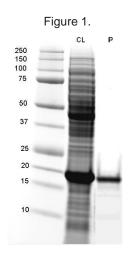
mM Tris-HCl, 0.1 M NaCl, 1 mM MgCl₂, pH 7.5. Store at 2-4 °C for immediate use within 1 week or

at -80 °C for up to 6 months. Avoid repeated freeze-thaw cycles.

Instruction: Beta-synuclein belongs to the family of highly conservative proteins in vertebrates. N-

terminal of β -synuclein is highly homologous to α -, γ -synucleins and consists of degenerative "KTKEGV" repeats (1-4). Similar to α -synuclein, beta-synuclein is found primarily in the brain; however, it does not associate with Lewy bodies in Parkinson disease like α -synuclein (1-4). Beta-synuclein was found to inhibit production of phosphatidic acid by the phospholipase D2 transmembrane protein *in vitro* (1). In addition, beta-synuclein was detected in many breast and ovarian tumors (4). Recent investigations demonstrated that beta-synuclein can induce mild experimental

autoimmune encephalomyelitis (EAE) in Lewis rats (5).



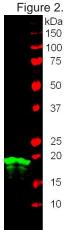


Figure 1. SDS-PAGE analysis of the recombinant human β-synuclein Purified Human beta-synuclein was loaded onto 10-20% Tris-HCl gel at 8 μ g/well and resolved at 200V for 60 minutes. Protein markers are on the left, CL=crude cell lysate, P=purified beta-synuclein ~18 kDa that is different from its predicted mass.

Figure 2. Human beta-synuclein detected by Western blot
Purified Human beta-synuclein was run on SDS-PAGE and transferred
onto nitrocellulose membrane. Beta-synuclein was detected using rabbit
anti-synuclein-beta antibody (Cat.# 53879) in fluorescent Western blot.

For in vitro research use only.

Related Products

Product Name	Cat. #
EndoClear [™] Plus Human Recombinant human a - synuclein	AS-56081-100;
	AS-56081-500
EndoClear [™] Human Recombinant human a - synuclein	AS-55555-100
	AS-55555-500
	AS-55555-1000
Recombinant human a - synuclein (1 - 140), HiLyte Fluor™488 labeled	AS-55457
SensoLyte® Anti-a-Synuclein (Human) ELISA Kit	AS-55550-H
Recombinant human a - synuclein (1 - 140), biotin labeled	AS-55581

References:

- 1. Rivers R.C. et. al. (2008) Protein Science 17: 887-898

- Kivers N.G. et. al. (2006) Protein Science 17: 007-036
 Sung Y.-H. et. al. (2006) Protein Science 15: 1162-1174
 George J. M. (2001) Genome Biology 3 (1): 3002.1-3002.6
 Bruening W. et. al. (2000) American Cancer Society 88 (9): 2154-2163
 Kela-Madar N. et. al. (2009) Journal of Neuroimmunology 208: 19-29