

Product Datasheet

Unmodified Human α -Synuclein Oligomers

Sequence	MDVFMKGLSKAKEGVVAAAEEKTKQGVAEAAGKTKEGVL YVGSKTKEGVVHGVATVAEKTKEQVTNVGGAVVTGVTA VAQKTVEGAGSIAAATGFVKKDQLGKNEEGAPQEGILED MPVDPDNEAYEMPSEEGYQDYEPEA
Swiss Prot	P37840
Gene ID	6622
Accession #	NP_000336.1
Species	Human
Amino acids	1-140, full length protein
Conjugates/Tags	No Tag
Molecular weight	14 kDa (14,460 Da)
Nature	Recombinant, expressed in Escherichia coli
Certificate of analysis	Certified > 95 % purity by SDS-PAGE. Full characterization provided in Figure 1.
Field of Use	Not for use in humans. For research purposes only.
Applications	In vitro assays, cellular assays, animal studies or as standards in WB, SDS-PAGE, ELISA, and other immunoassays.
Form	Shipped on dry ice.
Preparation	Protein is prepared in PBS at 0.12 mg/ml.
Storage	Store at -80°C upon receipt.
Handling	Protein is stable for up to 3 freeze/thaw cycles. We recommend avoiding repeated thawing cycles.
Product Citation	In case of publication or scientific presentations using this product, please cite as “Unmodified Human α -Synuclein Oligomers (ND Biosciences SA, Switzerland, Catalogue #ND002, Lot #11/21-002.001.1)”. Characterization data (Figure 1) remains property of ND Biosciences and is not to be used in any publications without written permission from ND Biosciences.
Safety measures	This product is an active protein and may elicit a biological response in vivo, handle with caution.
References	Detailed protocols on how to handle this protein are presented in: Kumar ST, Donzelli S, Chiki A, Syed MMK, Lashuel HA. A simple, versatile and robust centrifugation-based filtration protocol for the isolation and quantification of α -synuclein monomers, oligomers and fibrils: Towards improving experimental reproducibility in α -synuclein research. J Neurochem. 2020;153(1):103-119. doi:10.1111/jnc.14955.

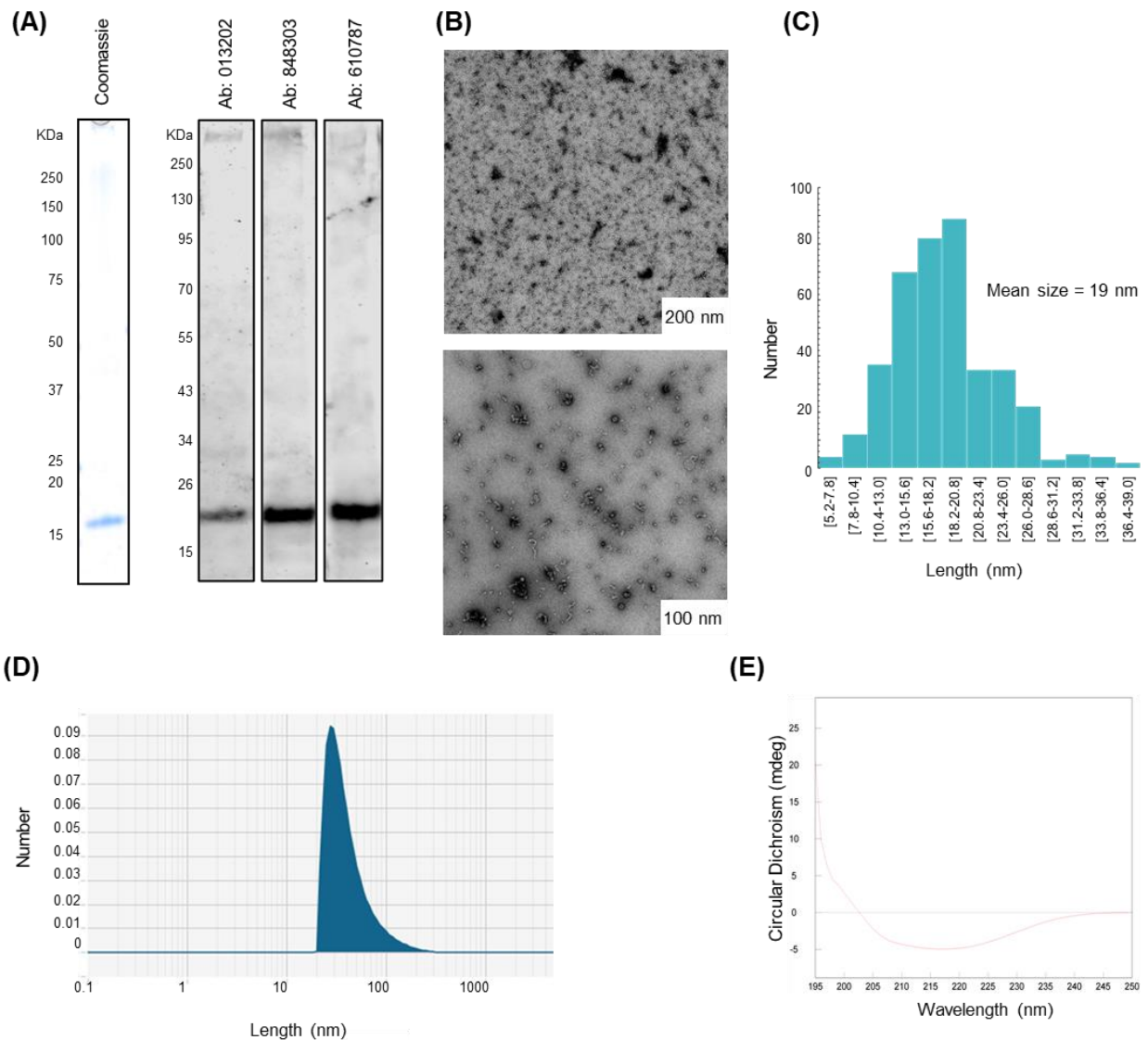


Figure 1. Characterization of α -Syn oligomers. (A) Coomassie staining and western blot analysis using different antibodies (Ab: 013202, Abbexa, epitope: 15-64, Ab: 848303, Biogen, epitope: 80-96, and Ab: 610787, BD-Biosciences, epitope: 91-99) shows that α -Syn oligomers migrate as SDS-resistant high molecular weight (HMW) species (>250kDa), with some oligomers breaking down to monomers at ~14 kDa. (B) Transmission electron microscopy (TEM) of uranyl acetate stained α -Syn oligomers shows a population of annular pores and spherical/tubular-like particles. (C) The size distribution of oligomers visualized by TEM is between 5 and 39 nm, with an average size of 19 nm. (D) Dynamic light scattering analysis of α -Syn monomers shows a homogenous population in terms of size distribution, with average size of ~30 nm. (E) CD analysis shows a spectrum with a minimum at 215 nm, establishing β -sheet conformation of α -Syn oligomers.



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