

## Product Data Sheet

<b>Product Name:</b>	EndoClear™* Human Recombinant alpha-Synuclein Protein (< 0.1 EU per µg protein)	
<b>Catalog Number:</b>	AS-55555	Lot Number: See label on the vial
<b>Amount/size:</b>	100 µg, 500 µg, 1000 µg	
<b>Source:</b>	Full-length recombinant human alpha-synuclein (GenBank Accession # NP_000336) was expressed in <i>E. coli.</i> , and purified from bacterial lysate using proprietary method. Endotoxin was further removed by proprietary technique. Molecular weight of the recombinant α-synuclein protein is 14.5 kDa.	
<b>Activity:</b>	α-synuclein was assayed for the fibrillation properties using Thioflavin T assay.	
<b>Applications:</b>	Fibrillation, oligomerization, cell toxicity studies.	
<b>Purity:</b>	Greater than 95% as determined by SDS-PAGE.	
<b>Endotoxin:</b>	Less than 0.1 EU per µg protein as tested by LAL method. *For more stringent applications, EndoClear™ Plus offers even lower endotoxin levels (AS-56081).	
<b>Storage:</b>	The purified α-synuclein is supplied as lyophilized powder nearly salt free. Store at 2-4 °C for immediate use within 1-2 weeks or at -80 °C for up to 12 months.	

\*previously named EndoFree Human Recombinant alpha-synuclein Protein

**Instructions:** α-synuclein is a major component of Lewy bodies in the affected neurons in Parkinson's disease.<sup>1-4</sup> This protein has a mass of 14.5 kDa (140 amino acids long) and consists of a conserved degenerative amino-terminal domain and an acidic carboxyl-terminal with higher sequence divergence.<sup>1-4</sup> α-synuclein is predominantly expressed in brain; specifically in cerebellum, thalamus, neocortex, hippocampus, and striatum regions.<sup>1-2</sup> Other tissues express α-synuclein at very low levels.<sup>1-4</sup> The physiological role of α-synuclein is not yet well understood. However, the presence of imperfect KTKEGV lipid interacting repeats suggests that it may be involved in synaptic vesicle homeostasis.<sup>3</sup>

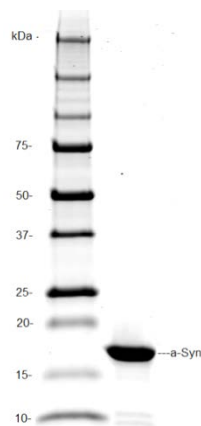


Figure 1.



Figure 2

**Figure 1. Human α-synuclein on SDS-PAGE.**  
Purified protein was loaded onto 10-20% Tris-HCl gel at 3 µg/well.

**Figure 2. Western Immunoblot of α-synuclein.**  
Purified α-synuclein protein was probed with anti-α-synuclein specific antibody.

Related Products:

Product Name	Cat. #
EndoClear™ <i>Plus</i> Human Recombinant human $\alpha$ - synuclein	<b>AS-56081-100</b> <b>AS-56081-500</b>
Recombinant human $\alpha$ - synuclein (1 - 140), HiLyte Fluor™488 labeled	<b>AS-55457</b>
Recombinant Human $\beta$ - synuclein (1 - 134)	<b>AS-55458-100</b> <b>AS-55458-500</b> <b>AS-55458-1000</b>
SensoLyte® Anti- $\alpha$ -synuclein (Human) ELISA Kit	<b>AS-55550-H</b>
Recombinant human $\alpha$ - synuclein (1 - 140), biotin labeled	<b>AS-55581</b>

References:

1. Rivers, R. et al. *Protein Science* **17**, 887-898 (2008).
2. Bruening, W. et al. *Cancer*. **88**, 9, 2154-2163 (2000).
3. George M. J. *Genome Biology* **3**, 1, 1-6 (2001).
4. Latawiec, D. et al. *PloS ONE* **5**, 2, 1-8 (2010).

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