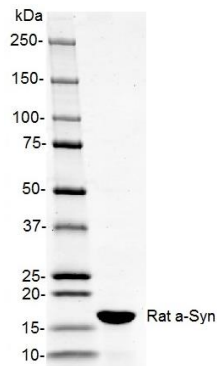




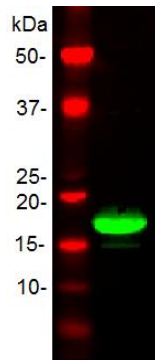
## Product Information Sheet

<b>Product Name:</b>	EndoClear™ Rat Recombinant alpha-Synuclein Protein ( $< 0.1$ EU per $\mu\text{g}$ protein)
<b>Catalog Number:</b>	AS-56083
<b>Lot Number:</b>	See label on the vial
<b>Amount/size:</b>	100 $\mu\text{g}$ , 500 $\mu\text{g}$ , 1000 $\mu\text{g}$
<b>Source:</b>	The sequence (Accession # NP_062042) corresponding to the full length rat $\alpha$ -synuclein protein was expressed in <i>E. coli</i> . The recombinant $\alpha$ -synuclein protein was purified from bacterial lysate using proprietary method. The molecular weight of the recombinant $\alpha$ -synuclein protein is $\sim 14.5$ kDa.
<b>Activity:</b>	$\alpha$ -synuclein was assayed for the fibrillation properties using Thioflavin T assay.
<b>Applications:</b>	Fibrillation, oligomerization, cell toxicity studies.
<b>Purity:</b>	Greater than 90% as determined by SDS-PAGE.
<b>Endotoxin:</b>	Less than 0.1 EU per $\mu\text{g}$ /protein as tested by LAL method.
<b>Storage:</b>	The purified $\alpha$ -synuclein is supplied as lyophilized powder salt free. Store at 2-4 °C for immediate use within 1-2 weeks or at $-80$ °C for up to 12 months.

**Instructions:**  $\alpha$ -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>  $\alpha$ -synuclein is predominantly expressed in brain: specifically in cerebellum, thalamus, neocortex, hippocampus, and striatum regions.<sup>1-2</sup> Other tissues express  $\alpha$ -synuclein at very low levels.<sup>1-4</sup> The physiological role of  $\alpha$ -ynuclein 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. Rat  $\alpha$ -synuclein on SDS-PAGE.**

Purified protein was loaded onto 10-20% Tris-HCl gel at 3  $\mu\text{g}$ /well.

**Figure 2. Western Immunoblot of rat  $\alpha$ -synuclein.**

Purified rat  $\alpha$ -synuclein protein was probed with anti-  $\alpha$ -synuclein specific antibody.

## Related Products

Product Name	Cat. #
<a href="#">Recombinant human <math>\alpha</math> - synuclein (1 - 140), HiLyte Fluor™488 labeled</a>	AS-55457
<a href="#">Recombinant Human <math>\beta</math> - Synuclein (1 - 134)</a>	AS-55458-100 AS-55458-500 AS-55458-1000
<a href="#">SensoLyte® Anti-<math>\alpha</math>-Synuclein (Human) ELISA Kit</a>	AS-55550-H
<a href="#">EndoClear™* Human Recombinant alpha - Synuclein</a>	AS-55555-100 AS-55555-500 AS-55555-1000
<a href="#">EndoClear™Plus Recombinant Human alpha - Synuclein</a>	AS-56081-100 AS-56081-500
<a href="#">Recombinant human <math>\alpha</math> - synuclein (1 - 140), biotin labeled</a>	AS-55581
<a href="#">EndoClear™ Mouse Recombinant alpha - Synuclein</a>	AS-56082-100 AS-56082-500 AS-56082-1000

## 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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