**DESCRIPTION**

**Species Reactivity**
Human

**Specificity**
Detects human α-Synuclein in direct ELISAs and Western blots. In direct ELISAs, less than 3% cross-reactivity with recombinant human (rh) β-Synuclein and rhγ-Synuclein is observed.

**Source**
Polyclonal Goat IgG

**Purification**
Antigen Affinity-purified

**Immunogen**
E. coli-derived recombinant human α-Synuclein
Met1-Ala140
Accession # P37840

**Formulation**
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

**Recommended Concentration**

<table>
<thead>
<tr>
<th><strong>Sample</strong></th>
<th><strong>Western Blot</strong></th>
<th>See Below</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Immunohistochemistry</strong></td>
<td>5-15 μg/mL</td>
<td>See Below</td>
</tr>
</tbody>
</table>
| **ELISA** | | This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human α-Synuclein Monoclonal Antibody (Catalog # MAB13384). This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human alpha-Synuclein DuoSet ELISA Kit (Catalog # DY1338-05) for convenient development of a sandwich ELISA.

**DATA**

### Western Blot

**Detection of Human α-Synuclein by Western Blot.**
Western blot shows lysates of human brain (motor cortex) tissue, human brain (cerebellum) tissue, SH-SY5Y human neuroblastoma cell line, and U-87 MG human glioblastoma/astrocytoma cell line. PVDF membrane was probed with 1 μg/mL of Goat Anti-Human α-Synuclein Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1338) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for α-Synuclein at approximately 18 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### ELISA

**Human α-Synuclein ELISA Standard Curve.** Recombinant Human α-Synuclein protein was serially diluted 2-fold and captured by Mouse Anti-Human α-Synuclein Monoclonal Antibody (Catalog # MAB13384) coated on a Clear Polystyrene Microplate (Catalog # DY990). Goat Anti-Human α-Synuclein Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1338) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY996) followed by Substrate Solution (Catalog # DY998) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

### Immunohistochemistry

**α-Synuclein in Human Brain.** α-Synuclein was detected in immersion fixed paraffin-embedded sections of human brain (hypothalamus) using Goat Anti-Human α-Synuclein Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1338) at 15 μg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal processes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.
### Preparation and Storage

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reconstitution</strong></td>
<td>Reconstitute at 0.2 mg/mL in sterile PBS.</td>
</tr>
<tr>
<td><strong>Shipping</strong></td>
<td>The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. <em>Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C</em></td>
</tr>
</tbody>
</table>
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**  
- 12 months from date of receipt, -20 to -70 °C as supplied.  
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.  
- 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

### Background

α-Synuclein is a cytoplasmic protein that is predominantly expressed in the central nervous system. It is a minor protein found in amyloid deposition that is a hallmark of Alzheimer’s disease. Defects in SNCA are associated with familial Parkinson’s disease.