## invitrogen\*

PI AHB0261

## Mouse (monoclonal) Anti-Human α-Synuclein

## **PRODUCT ANALYSIS SHEET**

| Catalog Number:                  | AHB0261  |
|----------------------------------|--|
| Lot Number:                      | See product label  |
| Quantity:                        | 0.1 mg/0.2 mL  |
| Clone Number:                    | Syn 211  |
| Isotype:                         | IgG1   |
| Form of Antibody:                | Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 0.1% BSA.   |
| Preservation:                    | 0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance.<br>Handle with care and dispose of properly.)   |
| Purification:                    | Purified from ascites by Protein A/G affinity chromatography.  |
| Immunogen:                       | Recombinant human α-synuclein.   |
| Specificity:                     | This antibody recognizes the 19 kDa protein, $\alpha$ -synuclein, which belongs to a family of small cytoplasmic proteins expressed predominantly in neurons. The epitope maps to amino acid residues 121-125 of human $\alpha$ -synuclein. $\alpha$ -synuclein may be involved in neuronal plasticity and could act as a molecular chaperone that mediates the transformation of soluble A $\beta$ into insoluble amyloid. The protein is a major component of Lewy bodies, the pathological hallmark of Parkinson's disease, and is also observed in senile plaques of Alzheimer's disease patients. Human $\alpha$ -synuclein appears to be phosphorylated at two major sites, serine 129 and serine 87, and phosphorylation may play a role in the functional regulation of the protein. |
| Species Reactivity:              | Human. Does not cross-react with mouse or rat. Other species were not tested.  |
| Applications:                    | This antibody is suitable for ELISA, for immunohistochemistry with formalin-fixed paraffin sections, and for Western blotting.   |
| Suggested Working<br>Dilutions:  | For Western blotting, the recommended antibody concentration is 0.5-1.0 $\mu$ g/mL. The optimal concentration should be determined for each specific application.  |
| Recommended Positive<br>Control: | Human SHSY-5Y cells.   |
| Storage:                         | Store at 2-8°C for up to one month. For long term storage, aliquot into small volumes and store at $-20$ °C. Avoid repeated freeze-thaw cycles to avoid denaturing the antibody.   |

This product is for research use only. Not for use in diagnostic procedures.

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**References:** 

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Bruening, W., et al. (2000) Synucleins are expressed in the majority of breast and ovarian carcinomas and in preneoplastic lesions of the ovary. Cancer 88(9):2154-2163.

Giasson, B.I., et al. (2000) A panel of epitope-specific antibodies detects protein domains distributed throughout human  $\alpha$ -synuclein in Lewy bodies of Parkinson's disease. J. Neurosci. Res. 59(4):528-533.

Giasson, B.I. (2000) Oxidative damage linked to neurodegeneration by selective alphasynuclein nitration in synucleinopathy lesions. Science 290:985-989.

McLean, P.J., et al. (2000) Membrane association and protein conformation of  $\alpha$ -synuclein in intact neurons. J. Biol. Chem. 275(12):8812-8816.

Okochi, M., et al. (2000) Constitutive phosphorylation of the Parkinson's disease associated  $\alpha$ -synuclein. J. Biol. Chem. 275(1):390-397.

α-Synuclein→ (19 kDa) Extracts of SHSY-5Y human neuroblastoma cells were resolved by SDS PAGE and transferred to a PVDF membrane. Membranes were incubated with 1  $\mu$ g/mL of the anti- $\alpha$  synuclein antibody (Syn 211). After washing, membranes were incubated with goat F(ab')<sub>2</sub> anti-mouse IgG alkaline phosphatase (cat. # AMI4405) diluted 1:5000 and the membrane was incubated with CDP-substrate using the WesternStar<sup>TM</sup> method (Tropix). The membrane was then exposed to Kodak BioMax film.

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