

**Alpha-synuclein Antibody (internal region)**  
Peptide-affinity purified goat antibody  
Catalog # AF3845a

**Specification**

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**Alpha-synuclein Antibody (internal region) - Product Information**

Application	WB
Primary Accession	<a href="#">P37840</a>
Other Accession	<a href="#">NP_009292.1</a> , <a href="#">NP_000336.1</a> , <a href="#">6622</a> , <a href="#">20617</a> (mouse), <a href="#">29219</a> (rat)
Reactivity	Human, Mouse
Predicted	Rat, Pig, Dog
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	14460

**Alpha-synuclein Antibody (internal region) - Additional Information**

**Gene ID** 6622

**Other Names**

Alpha-synuclein, Non-A beta component of AD amyloid, Non-A4 component of amyloid precursor, NACP, SNCA, NACP, PARK1

**Format**

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Alpha-synuclein Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

**Alpha-synuclein Antibody (internal region) - Protein Information**

**Name** SNCA

**Synonyms** NACP, PARK1

**Function**

Neuronal protein that plays several roles in synaptic activity such as regulation of synaptic vesicle trafficking and subsequent neurotransmitter release (PubMed:<a href="http://www.uniprot.org/citations/20798282" target="\_blank">20798282</a>, PubMed:<a

href="http://www.uniprot.org/citations/26442590" target="\_blank">26442590</a>, PubMed:<a href="http://www.uniprot.org/citations/28288128" target="\_blank">28288128</a>, PubMed:<a href="http://www.uniprot.org/citations/30404828" target="\_blank">30404828</a>). Participates as a monomer in synaptic vesicle exocytosis by enhancing vesicle priming, fusion and dilation of exocytotic fusion pores (PubMed:<a href="http://www.uniprot.org/citations/28288128" target="\_blank">28288128</a>, PubMed:<a href="http://www.uniprot.org/citations/30404828" target="\_blank">30404828</a>). Mechanistically, acts by increasing local Ca(2+) release from microdomains which is essential for the enhancement of ATP-induced exocytosis (PubMed:<a href="http://www.uniprot.org/citations/30404828" target="\_blank">30404828</a>). Acts also as a molecular chaperone in its multimeric membrane-bound state, assisting in the folding of synaptic fusion components called SNAREs (Soluble NSF Attachment Protein REceptors) at presynaptic plasma membrane in conjunction with cysteine string protein-alpha/DNAJC5 (PubMed:<a href="http://www.uniprot.org/citations/20798282" target="\_blank">20798282</a>). This chaperone activity is important to sustain normal SNARE-complex assembly during aging (PubMed:<a href="http://www.uniprot.org/citations/20798282" target="\_blank">20798282</a>). Also plays a role in the regulation of the dopamine neurotransmission by associating with the dopamine transporter (DAT1) and thereby modulating its activity (PubMed:<a href="http://www.uniprot.org/citations/26442590" target="\_blank">26442590</a>).

#### Cellular Location

Cytoplasm. Membrane. Nucleus. Synapse Secreted. Cell projection, axon {ECO:0000250|UniProtKB:O55042}. Note=Membrane-bound in dopaminergic neurons (PubMed:15282274). Expressed and colocalized with SEPTIN4 in dopaminergic axon terminals, especially at the varicosities (By similarity). {ECO:0000250|UniProtKB:O55042, ECO:0000269|PubMed:15282274}

#### Tissue Location

Highly expressed in presynaptic terminals in the central nervous system. Expressed principally in brain

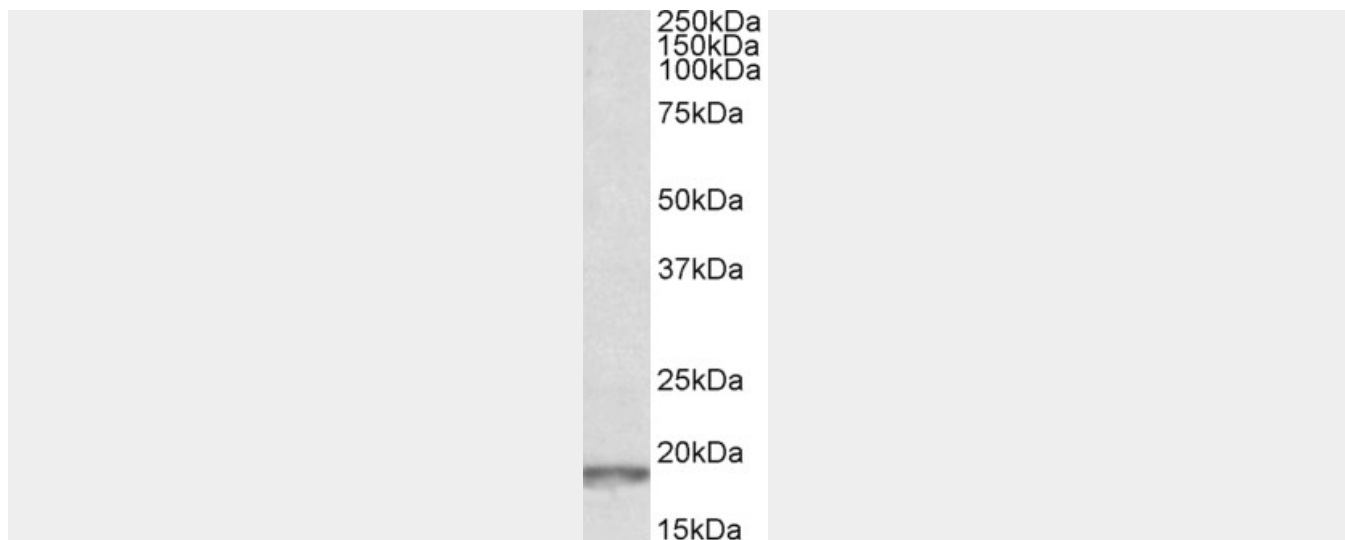
#### Alpha-synuclein Antibody (internal region) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Alpha-synuclein Antibody (internal region) - Images





AF3846a (0.1  $\mu\text{g/ml}$ ) staining of fetal Mouse Brain lysate (35  $\mu\text{g}$  protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

#### **Alpha-synuclein Antibody (internal region) - Background**

This antibody is expected to recognize both reported isoforms (NP\_009292.1; NP\_000336.1). Reported variants represent identical protein: NP\_000336.1, NP\_001139527.1, NP\_001139526.1

#### **Alpha-synuclein Antibody (internal region) - References**

Mimicking phosphorylation at serine 87 inhibits the aggregation of human  $\alpha$ -synuclein and protects against its toxicity in a rat model of Parkinson's disease. Oueslati A, Paleologou KE, Schneider BL, Aebischer P, Lashuel HA. J Neurosci. 2012 Feb 1;32(5):1536-44. PMID: 22302797