

# SNCA Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP6401B

## Product Information

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<b>Application</b>	IHC-P, WB, E
<b>Primary Accession</b>	<a href="#">P37840</a>
<b>Other Accession</b>	<a href="#">NP_009292</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB07369
<b>Calculated MW</b>	14460
<b>Antigen Region</b>	75-104

## Additional Information

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<b>Gene ID</b>	6622
<b>Other Names</b>	Alpha-synuclein, Non-A beta component of AD amyloid, Non-A4 component of amyloid precursor, NACP, SNCA, NACP, PARK1
<b>Target/Specificity</b>	This SNCA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 75-104 amino acids from the C-terminal region of human SNCA.
<b>Dilution</b>	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	SNCA Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	SNCA
<b>Synonyms</b>	NACP, PARK1
<b>Function</b>	Neuronal protein that plays several roles in synaptic activity such as

regulation of synaptic vesicle trafficking and subsequent neurotransmitter release (PubMed:[20798282](#), PubMed:[26442590](#), PubMed:[28288128](#), PubMed:[30404828](#)). Participates as a monomer in synaptic vesicle exocytosis by enhancing vesicle priming, fusion and dilation of exocytotic fusion pores (PubMed:[28288128](#), PubMed:[30404828](#)). Mechanistically, acts by increasing local Ca(2+) release from microdomains which is essential for the enhancement of ATP-induced exocytosis (PubMed:[30404828](#)). Also acts 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:[20798282](#)). This chaperone activity is important to sustain normal SNARE-complex assembly during aging (PubMed:[20798282](#)). Also plays a role in the regulation of the dopamine neurotransmission by associating with the dopamine transporter (DAT1) and thereby modulating its activity (PubMed:[26442590](#)).

### 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

## Background

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Alpha Synuclein is implicated in the regulation of dopamine release and transport. It is a soluble protein, expressed principally in the brain but also expressed in low concentrations in all tissues examined (except liver). In the nervous system, alpha Synuclein is primarily located at presynaptic terminals and is found membrane bound in dopaminergic neurons. It can form filamentous aggregates that are the major non amyloid component of intracellular inclusions in several neurodegenerative diseases (synucleinopathies), including Parkinson's Disease. Alpha Synuclein induces fibrillization of microtubule associated protein tau and reduces neuronal responsiveness to various apoptotic stimuli, leading to a decreased caspase 3 activation. Alpha synuclein is a protein phosphorylated predominantly on serine residues. Additional splicing may be present but the full-length nature of these variants has not been determined. This variant (NACP112) lacks an alternate in-frame segment, compared to variant NACP140, resulting in a shorter protein (isoform NACP112) that has a distinct C-terminus, compared to isoform NACP140. This antibody recognizes both NACP112 and NACP140.

## References

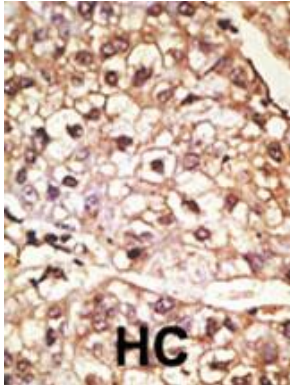
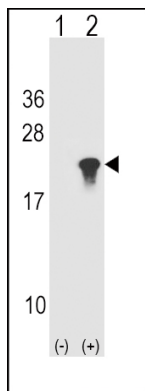
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- Kumru, H., et al., Ann. Neurol. 56(4):599-603 (2004).  
 Pigullo, S., et al., Parkinsonism Relat. Disord. 10(6):357-362 (2004).  
 Yao, D., et al., Proc. Natl. Acad. Sci. U.S.A. 101(29):10810-10814 (2004).  
 West, A.B., et al., J. Biol. Chem. 279(28):28896-28902 (2004).  
 Wang, F., et al., Genes Chromosomes Cancer 40(2):85-96 (2004).

## Images

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Western blot analysis of Park1 (arrow) using rabbit polyclonal Park1 Antibody (C-term) (Cat. #AP6401b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the Park1 gene.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

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