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SNCA Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6404a

Specification

SNCA Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	P37840
Other Accession	P61142, Q3T0G8, Q3I5G7, NP_000336
Reactivity	**Human, Mouse**
Predicted	**Bovine, Monkey, Pig**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**14460**
Antigen Region	**104-133**

SNCA Antibody (C-term) - 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

Target/Specificity
This SNCA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 104-133 amino acids from the C-terminal region of human SNCA.

Dilution
WB~~1:1000

Format
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.

Storage
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.

Precautions
SNCA Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SNCA Antibody (C-term) - 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: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). 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: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

SNCA Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SNCA Antibody (C-term) - Images

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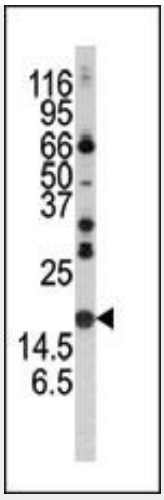
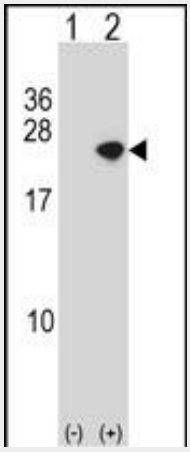


Western blot analysis of anti-Alpha-synuclein Pab (Cat. #AP6404a) in mouse brain tissue lysate. Alpha-synuclein (arrow) was detected using the purified Pab.



Western blot analysis of Park4 (arrow) using rabbit polyclonal Park4 Antibody (C-term) (Cat. #AP6404a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the Park4 gene.

SNCA Antibody (C-term) - Background

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. Two alternatively spliced transcripts of Alpha Synuclein have been identified. Additional splicing may be present but the full-length nature of these variants has not been determined. This variant (NACP140) is the longer transcript and encodes the longer isoform (NACP140). This antibody specific recognizing Alpha-synuclein isoform NACP140 not NACP112.

SNCA Antibody (C-term) - References

Kumru, H., et al., Ann. Neurol. 56(4):599-603 (2004).
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Yao, D., et al., Proc. Natl. Acad. Sci. U.S.A. 101(29):10810-10814 (2004).
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