

SNCA Antibody Catalog # ASC11829

Specification

SNCA Antibody - Product Information

Application **WB, IHC, IF**
Primary Accession [P37840](#)
Other Accession [NP_000336](#),
[6806898](#)
Reactivity **Human, Mouse, Rat**
Host **Rabbit**
Clonality **Polyclonal**
Isotype **IgG**
Calculated MW **Predicted: 12 kDa**

Application Notes **Observed: 16 kDa KDa**
SNCA antibody can be used for detection of SNCA by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

SNCA Antibody - Additional Information

Gene ID **6622**
Target/Specificity
SNCA; SNCA antibody is human, mouse and rat reactive. At least three isoforms of SNCA are known to exist.

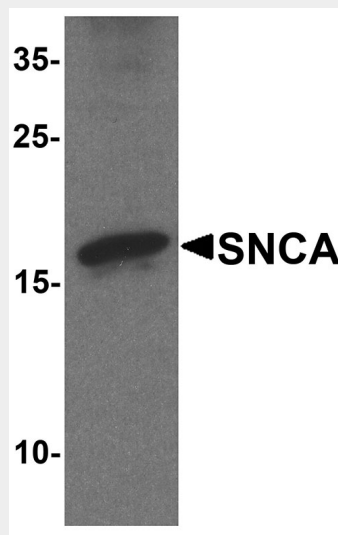
Reconstitution & Storage

SNCA antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

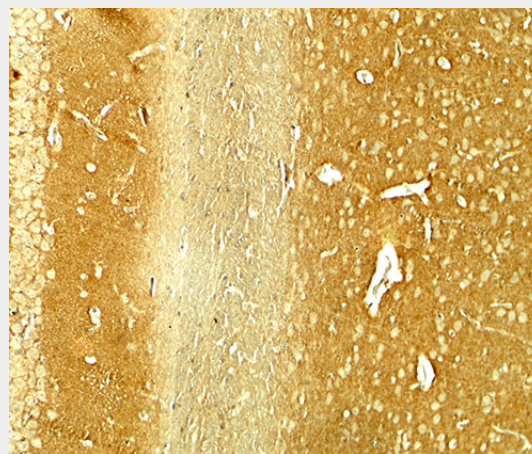
Precautions

SNCA Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SNCA Antibody - Protein Information



Western blot analysis of SNCA in mouse cerebellum tissue lysate with SNCA antibody at 1 µg/ml.



Immunohistochemistry of SNCA in rat brain tissue with SNCA antibody at 5 µg/ml.

Name SNCA

Synonyms NACP, PARK1

Function

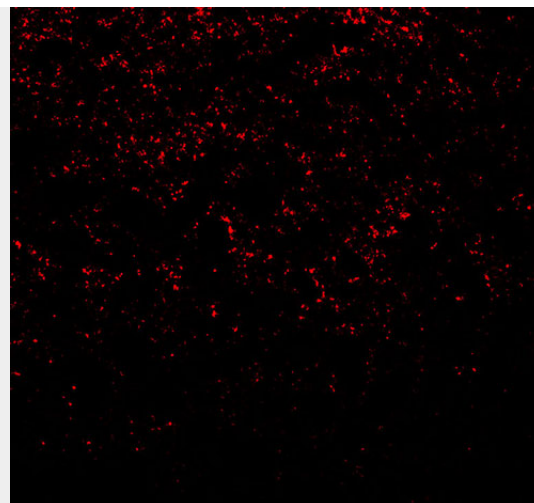
Neuronal protein that plays several roles in synaptic activity such as regulation of synaptic vesicle trafficking and subsequent neurotransmitter release. Participates as a monomer in synaptic vesicle exocytosis by enhancing vesicle priming, fusion and dilation of exocytotic fusion pores (PubMed:28288128, 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). Plays also 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. Cell junction, synapse. Secreted
Note=Membrane-bound in dopaminergic neurons

Tissue Location

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



Immunofluorescence of SNCA in rat brain tissue with SNCA antibody at 20 µg/ml.

SNCA Antibody - Background

Alpha-Synuclein (SNCA) is a hallmark of Alzheimer's disease (1,2). It is a cytoplasmic protein that is predominantly expressed in the central nervous system (2). SNCA reduces neuronal responsiveness to various apoptotic stimuli, leading to the decreased caspase-3 activation. SNCA may be involved in the regulation of dopamine release and transport and induces fibrillization of microtubule-associated protein tau (3). Defects in SNCA are associated with familial Parkinson's disease (4,5).

SNCA Antibody - References

- Ueda K, Fukushima H, Masliah E, et al. Molecular cloning of cDNA encoding an unrecognized component of amyloid in Alzheimer disease. Proc. Natl. Acad. Sci. USA 1993; 90:11282-6.
- Pronin AN, Morris AJ, Surguchov A, et al. Synucleins are a novel class of substrates for G protein-coupled receptor kinases. J. Biol. Chem. 2000; 275:26515-22.
- Oaks AW, Frankfurt M, Finkelstein DI, et al. Age-dependent effects of A53T alpha-synuclein on behavior and dopaminergic function. PLoS One 2013; 8:e60378.
- Polymeropoulos MH, Lavedan C, Leroy E, et al. Mutation in the alpha-synuclein gene identified in families with Parkinson's disease. Science 1997; 276:2045-7.

SNCA Antibody - 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](#)