10320 Camino Santa Fe, Suite G San Diego, CA 92121 Tel: 858.875.1900 Fax: 858.875.1999



alpha Synuclein Rabbit mAb

Catalog # AP75067

Product Information

Application WB, IHC-P, IP
Primary Accession P37840
Reactivity Human, Rat
Rabbit

Clonality Monoclonal Antibody

Calculated MW 14460

Additional Information

Gene ID 6622

Other Names SNCA

Dilution WB~~1/500-1/1000 IHC-P~~N/A IP~~N/A

Format 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and

0.05% BSA.

Storage Store at 4°C short term. Aliquot and store at -20°C long term. Avoid

freeze/thaw cycles.

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:<u>20798282</u>, PubMed:<u>26442590</u>, PubMed:<u>28288128</u>,

PubMed:<u>30404828</u>). Participates as a monomer in synaptic vesicle exocytosis by enhancing vesicle priming, fusion and dilation of exocytotic fusion pores (PubMed:<u>28288128</u>, PubMed:<u>30404828</u>). Mechanistically, acts by increasing

local Ca(2+) release from microdomains which is essential for the

enhancement of ATP-induced exocytosis (PubMed:<u>30404828</u>). 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:<u>20798282</u>).

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).

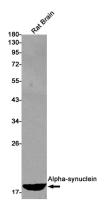
Cellular Location

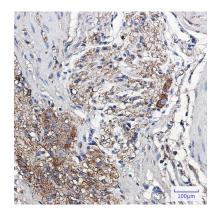
Cytoplasm. Membrane Nucleus Synapse. Secreted. Cell projection, axon {ECO:0000250 | UniProtKB:O55042}. Note=Membrane-bound in dopaminergic neurons (PubMed:15282274). Expressed and colocalized with SEPTIN4 in dopaminergic axon terminals, especially at the varicosities (By similarity). {ECO:0000250 | UniProtKB:O55042,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

Tissue Location

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

Images





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