

# Phospho-alpha Synuclein (S129) Antibody

Rabbit mAb

Catalog # AP90244

## Product Information

<b>Application</b>	WB, IHC, IF, ICC, IHF
<b>Primary Accession</b>	<a href="#">P37840</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	Alpha-synuclein; NACP; non A-beta component of AD amyloid; PARK1; PARK4; PD1; SNCA;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	14460

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human Phospho-alpha Synuclein (S129)
<b>Description</b>	SNCA a member of the synuclein family. Abundantly expressed in the brain. Inhibits phospholipase D2 selectively. May integrate presynaptic signaling and membrane trafficking. Implicated in the pathogenesis of Parkinson's disease. A major component of amyloid plaques in the brains of patients with Alzheimer's disease. Two alternatively spliced isoforms transcripts have been identified.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<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: <a href="#">20798282</a> , PubMed: <a href="#">26442590</a> , PubMed: <a href="#">28288128</a> , PubMed: <a href="#">30404828</a> ). Participates as a monomer in synaptic vesicle exocytosis by enhancing vesicle priming, fusion and dilation of exocytotic fusion pores (PubMed: <a href="#">28288128</a> , PubMed: <a href="#">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="#">30404828</a> ). 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

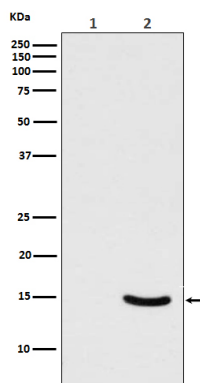
Cytoplasm. Membrane Nucleus Synapse. Secreted. Cell projection, axon {ECO:0000250|UniProtKB:O55042}. Note=Membrane-bound in dopaminergic neurons (PubMed:15282274). Expressed and colocalized with SEPTIN4 in dopaminergic axon terminals, especially at the varicosities (By similarity). {ECO:0000250|UniProtKB:O55042,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

### Tissue Location

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

## Images

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Western blot analysis of Phospho-alpha Synuclein (Ser129) expression in (1) 293T cell lysate; (2) 293T cell lysate transfected with Polo-Like Kinase 2 and alpha Synuclein.

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