



Rabbit Anti-alpha-Synuclein antibody

SL0009R

Product Name:	alpha-Synuclein
Chinese Name:	核突触蛋白- α 抗体(N端)
Alias:	Alpha synuclein; Alpha-Synuclein; Alpha-synuclein, isoform NACP140; alpha SYN; MGC105443; MGC110988; MGC127560; MGC64356; NACP; Non A beta component of AD amyloid; Non A4 component of amyloid precursor; Non-A-beta component of alzheimers disease amyloid , precursor of; Non-A beta component of AD amyloid; Non-A4 component of amyloid precursor; PARK 1; PARK 4; PARK1; PARK4; Parkinson disease (autosomal dominant, Lewy body) 4; Parkinson disease familial 1; PD 1; PD1; Syn; SNCA; Snca synuclein, alpha (non A4 component of amyloid precursor); SYUA_HUMAN; Synuclein alpha; Synuclein, alpha (non A4 component of amyloid precursor); Synuclein- α ; Synuclein α .
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Pig,Cow,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1ug/TestICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	14kDa
Cellular localization:	The nucleuscytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human alpha-Synuclein:51-90/140
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:[PubMed](#)

Alpha-synuclein is a member of the synuclein family, which also includes beta- and gamma-synuclein. Synucleins are abundantly expressed in the brain and alpha- and beta-synuclein inhibit phospholipase D2 selectively. SNCA may serve to integrate presynaptic signaling and membrane trafficking. Defects in SNCA have been implicated in the pathogenesis of Parkinson disease. SNCA peptides are a major component of amyloid plaques in the brains of patients with Alzheimer's disease. Alternatively spliced transcripts encoding different isoforms have been identified for this gene. [provided by RefSeq, Feb 2016].

Function:

May be involved in the regulation of dopamine release and transport. Induces fibrillization of microtubule-associated protein tau. Reduces neuronal responsiveness to various apoptotic stimuli, leading to a decreased caspase-3 activation.

Subunit:

Soluble monomer which can form filamentous aggregates. Interacts with UCHL1. Interacts with phospholipase D and histones.

Subcellular Location:

Cytoplasm. Membrane. Nucleus. Cell junction, synapse. Note=Membrane-bound in dopaminergic neurons.

Product Detail:**Tissue Specificity:**

Expressed principally in brain but is also expressed in low concentrations in all tissues examined except in liver. Concentrated in presynaptic nerve terminals.

Post-translational modifications:

Phosphorylated, predominantly on serine residues. Phosphorylation by CK1 appears to occur on residues distinct from the residue phosphorylated by other kinases.

Phosphorylation of Ser-129 is selective and extensive in synucleinopathy lesions. In vitro, phosphorylation at Ser-129 promoted insoluble fibril formation. Phosphorylated on Tyr-125 by a PTK2B-dependent pathway upon osmotic stress.

Hallmark lesions of neurodegenerative synucleinopathies contain alpha-synuclein that is modified by nitration of tyrosine residues and possibly by dityrosine cross-linking to generated stable oligomers.

Ubiquitinated. The predominant conjugate is the diubiquitinated form (By similarity).

Acetylation at Met-1 seems to be important for proper folding and native oligomeric structure.

DISEASE:

Note=Genetic alterations of SNCA resulting in aberrant polymerization into fibrils, are associated with several neurodegenerative diseases (synucleinopathies). SNCA fibrillar aggregates represent the major non A-beta component of Alzheimer disease amyloid plaque, and a major component of Lewy body inclusions. They are also found within Lewy body (LB)-like intraneuronal inclusions, glial inclusions and axonal spheroids in

neurodegeneration with brain iron accumulation type 1.

Parkinson disease 1 (PARK1) [MIM:168601]: A complex neurodegenerative disorder characterized by bradykinesia, resting tremor, muscular rigidity and postural instability. Additional features are characteristic postural abnormalities, dysautonomia, dystonic cramps, and dementia. The pathology of Parkinson disease involves the loss of dopaminergic neurons in the substantia nigra and the presence of Lewy bodies (intraneuronal accumulations of aggregated proteins), in surviving neurons in various areas of the brain. The disease is progressive and usually manifests after the age of 50 years, although early-onset cases (before 50 years) are known. The majority of the cases are sporadic suggesting a multifactorial etiology based on environmental and genetic factors. However, some patients present with a positive family history for the disease. Familial forms of the disease usually begin at earlier ages and are associated with atypical clinical features. Note=The disease is caused by mutations affecting the gene represented in this entry.

Parkinson disease 4 (PARK4) [MIM:605543]: A complex neurodegenerative disorder with manifestations ranging from typical Parkinson disease to dementia with Lewy bodies. Clinical features include parkinsonian symptoms (resting tremor, rigidity, postural instability and bradykinesia), dementia, diffuse Lewy body pathology, autonomic dysfunction, hallucinations and paranoia. Note=The disease is caused by mutations affecting the gene represented in this entry. [DISEASE] Dementia Lewy body (DLB) [MIM:127750]: A neurodegenerative disorder characterized by mental impairment leading to dementia, parkinsonism, fluctuating cognitive function, visual hallucinations, falls, syncopal episodes, and sensitivity to neuroleptic medication. Brainstem or cortical intraneuronal accumulations of aggregated proteins (Lewy bodies) are the only essential pathologic features. Patients may also have hippocampal and neocortical senile plaques, sometimes in sufficient number to fulfill the diagnostic criteria for Alzheimer disease. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

Belongs to the synuclein family.

SWISS:

P37840

Gene ID:

6622

Database links:

[Entrez Gene: 6622](#) Human

[Entrez Gene: 20617](#) Mouse

[Entrez Gene: 29219](#) Rat

[Omin: 163890](#) Human
[SwissProt: P37840](#) Human
[SwissProt: O55042](#) Mouse
[SwissProt: P37377](#) Rat
[Unigene: 21374](#) Human
[Unigene: 17484](#) Mouse
[Unigene: 1827](#) Rat

Important Note:

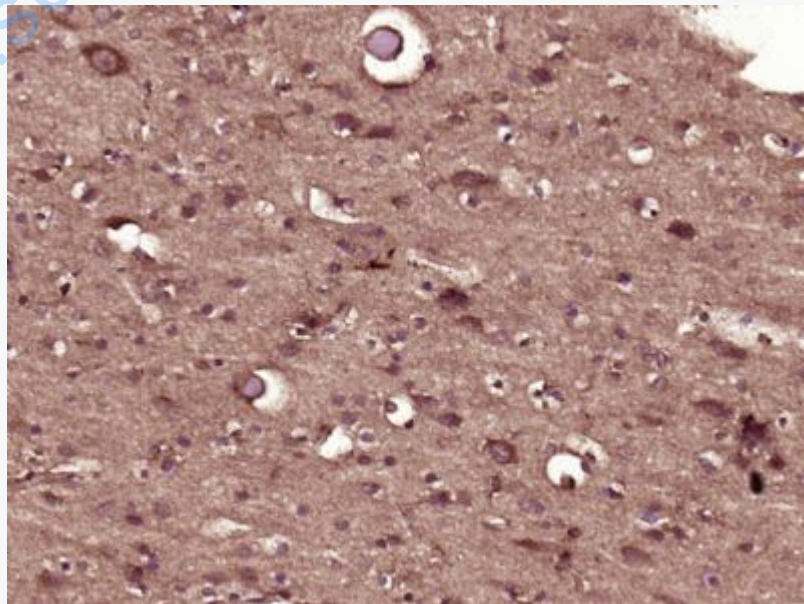
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Synuclein 包括 α -Synuclein, β -Synuclein 和 γ -Synuclein 是神经细胞中富含的前突触蛋白。 α -

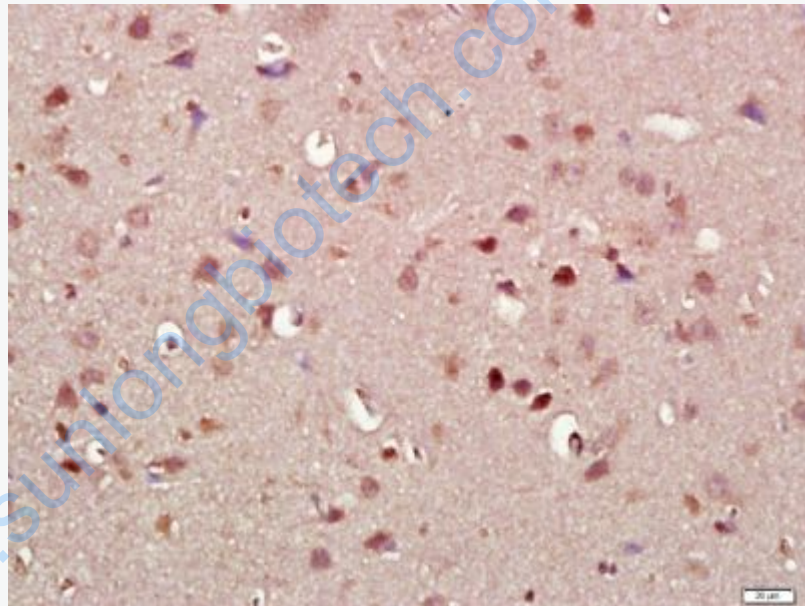
Synuclein, Alzheimer'(AD)病淀粉样蛋白沉积的成份之一, 集中分布在神经细胞的包体和突触。在帕金森病人中发现有 α -Synuclein的变异型, 而 γ -Synuclein与轴突病理学有关。

此抗体将为Lewy小体痴呆症、Parkinson症、AD和其它一些神经性疾病提供有用的病理诊断。

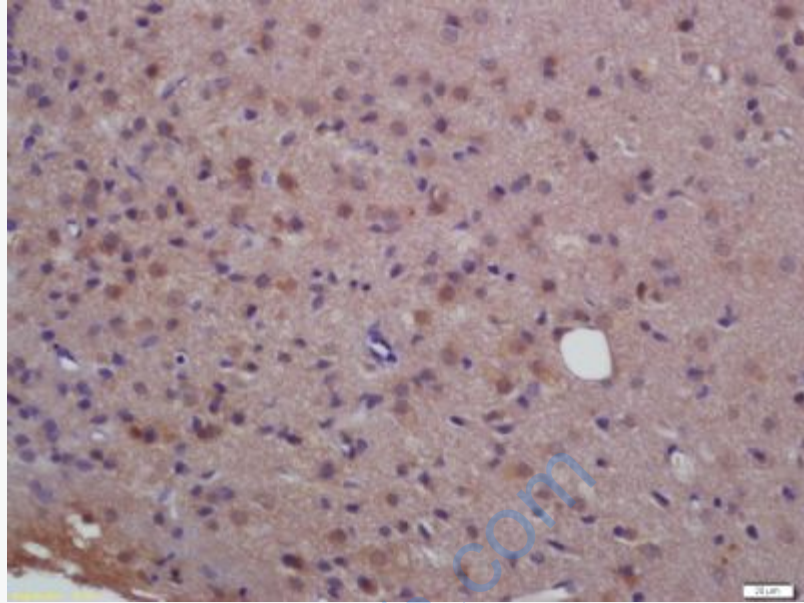
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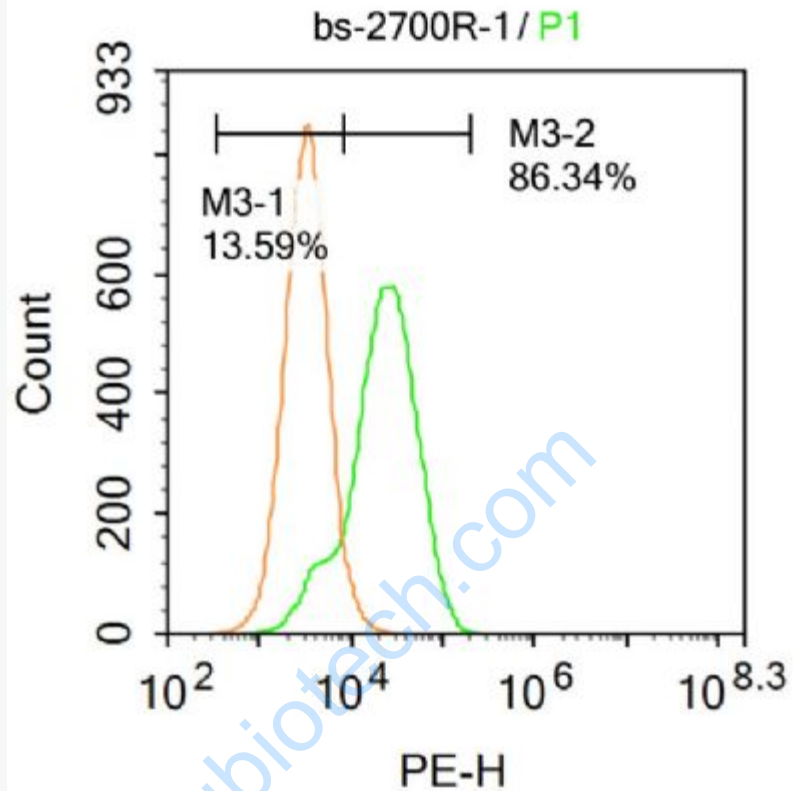
Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (alpha-Synuclein) Polyclonal Antibody, Unconjugated (SL0009R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (alpha-Synuclein) Polyclonal Antibody, Unconjugated (SL0009R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (alpha-Synuclein) Polyclonal Antibody, Unconjugated (SL0009R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Blank control: Hela.

Primary Antibody (green line): Rabbit Anti-alpha-Synuclein antibody (SL0009R)

Dilution: $1\mu\text{g}/10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g}/\text{test}$.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at -20°C . The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room

temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.

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