

## Product datasheet

# Anti-Alpha-synuclein (phospho S129) antibody ab59264

★★★★★ [4 Abreviews](#) [57 References](#) [3 Images](#)

### Overview

<b>Product name</b>	Anti-Alpha-synuclein (phospho S129) antibody
<b>Description</b>	Rabbit polyclonal to Alpha-synuclein (phospho S129)
<b>Host species</b>	Rabbit
<b>Specificity</b>	Detects endogenous levels of Synuclein only when phosphorylated at serine 129. Due to 69% sequence homology ab59264 might react with Beta synuclein.
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human
<b>Immunogen</b>	Synthetic peptide corresponding to Human Alpha-synuclein (phospho S129). Synthetic phosphopeptide derived from Human Synuclein around the phosphorylation site of serine 129 (M-P-SP-E-E). Database link: <a href="#">P37840</a>
<b>Positive control</b>	Human and mouse brain.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride
	Without Mg+2 and Ca+2
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal

Isotype

IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab59264 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/50 - 1/100. Antigen retrieval: Microwave method - put the slice into 10 mmol/L citrate buffer (pH 6.0), microwave high temperature for 5 minutes, and then medium temperature for 15 minutes. Primary antibody incubation: 1 hour at 37°C Secondary antibody: Poly-HRP-Anti Mouse/Rabbit IgG, 50 µL for 20 minutes.
WB	★★★★★ (3)	1/500 - 1/1000. Please see WB protocol details in the image legend.

## Target

### 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.

### 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.

### Involvement in disease

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  
Parkinson disease 4  
Dementia Lewy body

### Sequence similarities

Belongs to the synuclein family.

### Domain

The 'non A-beta component of Alzheimer disease amyloid plaque' domain (NAC domain) is involved in fibrils formation. The middle hydrophobic region forms the core of the filaments. The C-terminus may regulate aggregation and determine the diameter of the filaments.

### 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.

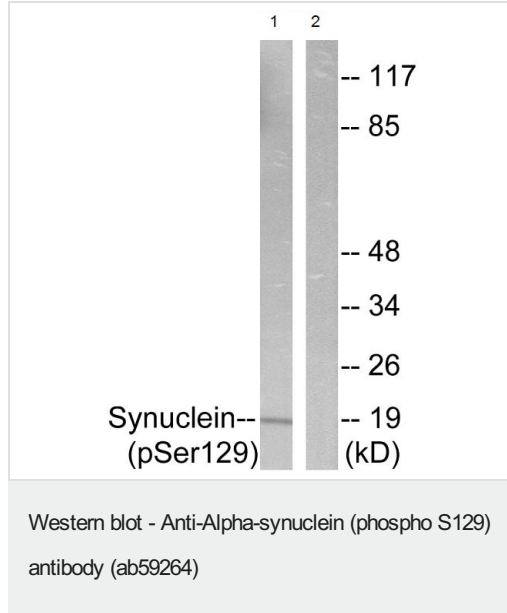
Ubiquitinated. The predominant conjugate is the diubiquitinated form.

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

## Cellular localization

Cytoplasm, cytosol. Membrane. Nucleus. Cell junction, synapse. Secreted. Membrane-bound in dopaminergic neurons.

## Images



**All lanes :** Anti-Alpha-synuclein (phospho S129) antibody (ab59264) at 1/500 dilution

**Lane 1 :** Mouse brain whole cell lysates

**Lane 2 :** Mouse brain whole cell lysates with immunogen phosphopeptide

Lysates/proteins at 40 µg per lane.

Blocking buffer: 5% (w/v) BSA in TBST.

Primary antibody dilution buffer: 5%(w/v)BSA,0.1%(v/v), Tween-20 in TBST.

Secondary antibody dilution buffer: 5%(w/v)BSA,0.1%(v/v),Tween-20 in TBST.

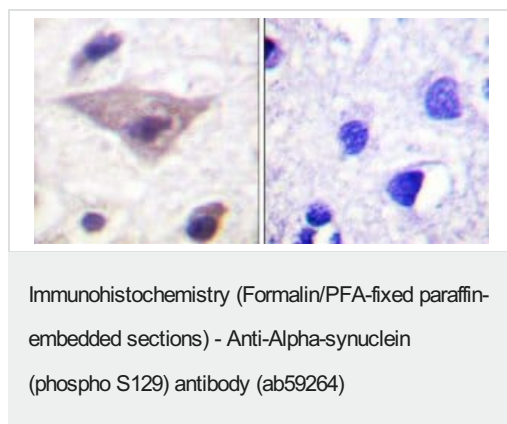
12% SDS gel. Nitrocellulose membrane.

Blocking: Room temperature for 2 hours or overnight at 4°C. Then wash 3x for 5 minutes with 0.05% blocking buffer.

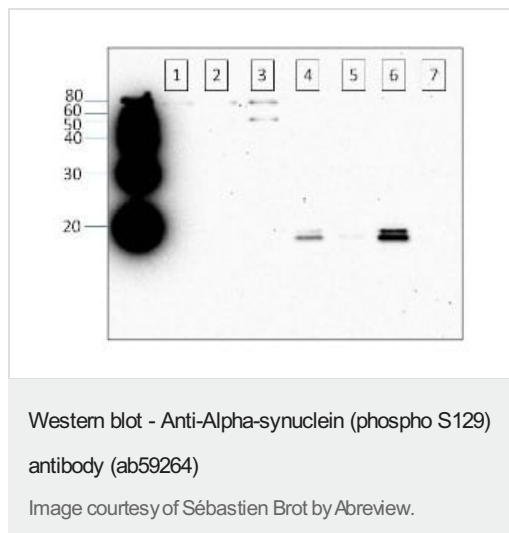
Primary antibody incubation: diluted in TBST at 1/500. Incubate overnight with 4 degrees shaking. Then, in 0.05% TBST, wash membrane 3-4 times for 10min.

Secondary antibody incubation: diluted in TBST at 1/2000. Incubate 37°C for 1 hour. Then, in 0.05% TBST, wash membrane 3-4 times for 10min.

ECL development.



Immunohistochemical analysis of paraffin-embedded human brain tissue using ab59264 at a dilution of 1/50-1/100. Left hand image - without immunising peptide; right hand image - with immunising peptide.



**All lanes :** Anti-Alpha-synuclein (phospho S129) antibody (ab59264) at 1/1000 dilution

**Lanes 1-3 :** Whole tissue lysate prepared from young transgenic mouse overexpressing human alpha-synuclein

**Lanes 4-6 :** Whole tissue lysate prepared from old transgenic mouse overexpressing human alpha-synuclein

**Lane 7 :** Whole tissue lysate prepared from KO mouse

Lysates/proteins at 50 µg per lane.

### Secondary

**All lanes :** Goat anti-rabbit Ig (H+L) HRP at 1/1000 dilution

Developed using the ECL technique.

**Observed band size:** 18,19 kDa

**Additional bands at:** 60 kDa, 80 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 5 minutes

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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