

## Product datasheet

# Anti-Alpha-synuclein antibody [LB 509] ab27766

★★★★☆ 11 Abreviews 24 References 画像数 6

### 製品の概要

<b>製品名</b>	Anti-Alpha-synuclein antibody [LB 509]
<b>製品の詳細</b>	Mouse monoclonal [LB 509] to Alpha-synuclein
<b>由来種</b>	Mouse
<b>特異性</b>	This antibody recognizes human alpha-synuclein. Clone LB 509 recognizes amino acids 115-122 of alpha-synuclein and has been reported to be specific to human alpha-synuclein (Jakes et al., Neurosci Lett., 1999). Therefore, we only guarantee this antibody to detect human alpha-synuclein. However, several customer Abreviews have demonstrated positive staining in rodent samples.
<b>アプリケーション</b>	<b>適用あり:</b> IHC-FoFr, ELISA, WB, IHC-Fr, IHC-P, Flow Cyt, ICC/IF, ICC
<b>種交差性</b>	<b>交差種:</b> Rat, Human
<b>免疫原</b>	Lewy bodies purified from patients suffering dementia with Lewy bodies
<b>エピトープ</b>	Ab27766 reacts with an epitope located in the region encoded by amino acids 115-122 of alpha-synuclein.
<b>ポジティブ・コントロール</b>	WB: full-length, recombinant alpha-synuclein protein.
<b>特記事項</b>	<p>This antibody clone is manufactured by Abcam.</p> <p>Alpha-synuclein is expressed predominantly in the brain, where it is concentrated in presynaptic nerve terminals. The deposition of the abundant presynaptic brain protein alpha-synuclein as fibrillary aggregates in neurons or glial cells is a hallmark lesion in a subset of neurodegenerative disorders. These disorders include Parkinson's disease (PD), dementia with Lewy bodies (DLB) and multiple system atrophy, collectively referred to as synucleinopathies. Parkinson's disease (PD) is a common neurodegenerative disorder characterized by the progressive accumulation in selected neurons of protein inclusions containing alpha-synuclein and ubiquitin.</p> <p>If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a> or you can find further information <a href="#">here</a>.</p>

### 製品の特性

<b>製品の状態</b>	Liquid
<b>保存方法</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>バッファー</b>	pH: 7.40 Preservative: 0.02% Sodium azide

	Constituents: PBS, 6.97% L-Arginine
精製度	Immunogen affinity purified
ポリモノ	モノクローナル
クローン名	LB 509
アイソタイプ	IgG1

## アプリケーション

Our [Abpromise guarantee](#) covers the use of **ab27766** in the following tested applications.

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

アプリケーション	Abreviews	特記事項
IHC-FoFr	★★★★☆	1/500.
ELISA		Use at an assay dependent concentration.
WB	★★★★☆	1/100 - 1/1000. Predicted molecular weight: 14 kDa.
IHC-Fr	★★★★★	1/100 - 1/1000.
IHC-P	★★★★☆	1/100 - 1/1000. Do not perform antigen retrieval.
Flow Cyt		Use 1µg for 10 <sup>6</sup> cells. <a href="#">ab170190</a> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★★	Use at an assay dependent concentration.
ICC		Use at an assay dependent concentration.

## ターゲット情報

機能	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.
組織特異性	Expressed principally in brain but is also expressed in low concentrations in all tissues examined except in liver. Concentrated in presynaptic nerve terminals.
関連疾患	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
配列類似性	Belongs to the synuclein family.
ドメイン	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.

## 翻訳後修飾

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.

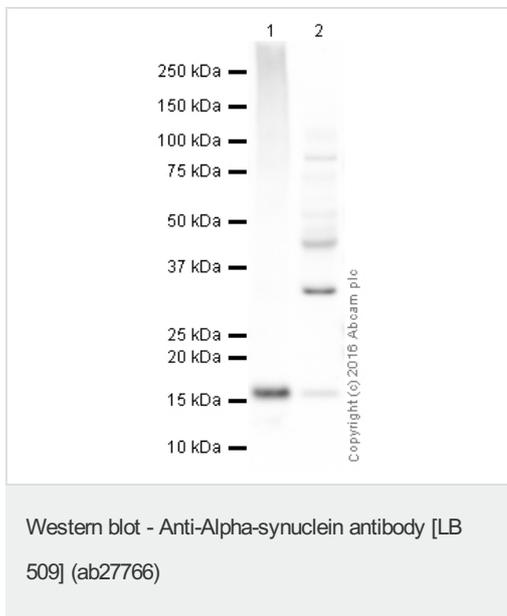
Ubiquitinated. The predominant conjugate is the diubiquitinated form.

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

## 細胞内局在

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

## 画像



**All lanes** : Anti-Alpha-synuclein antibody [LB 509] (ab27766) at 5 µg/ml

**Lane 1** : Recombinant Human Alpha-synuclein protein (ab51189)

**Lane 2** : Human brain hippocampus tissue lysate - total protein (ab30180)

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes** : Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

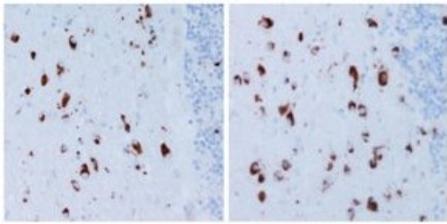
**Predicted band size:** 14 kDa

**Observed band size:** 16 kDa

[why is the actual band size different from the predicted?](#)

**Additional bands at:** 32 kDa (possible dimer)

**Exposure time:** 20 minutes

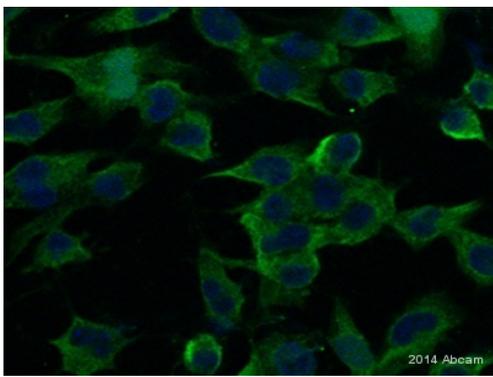


Formic acid pretreatment

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Alpha-synuclein antibody [LB 509] (ab27766)

This image was taken from an abreview submitted by an anonymous reviewer.

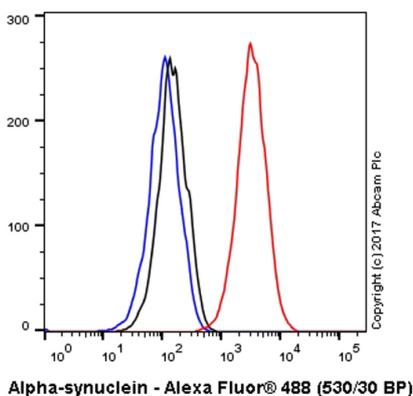
IHC-P image of Alpha Synuclein (ab27766) staining in human brain samples from patients with Multiple Systems Atrophy (MSA). The sections were subjected to heat-mediated antigen retrieval with citrate buffer. In addition, some slides received a 15 minute pre-treatment with Formic Acid. Sections were incubated in 20% serum for 30 minutes at +18°C to block non-specific protein-protein interactions. The sections were then incubated with ab27766 (1:400) for one hour at +18°C, followed by Biotin conjugated anti-mouse goat secondary antibody (1/200). Formic acid pre-treatment (15min) revealed more inclusions in MSA tissue.



Immunocytochemistry/ Immunofluorescence - Anti-Alpha-synuclein antibody [LB 509] (ab27766)

Image courtesy of anonymous Abreviewer

Human neuroblastoma cells stained for alpha-synuclein (green) using ab27766 in immunofluorescence. The neuroblastoma cells were fixed with paraformaldehyde and incubated with ab27766 (used at 5 µg/ml) for 12 hours at 4°C. A FITC conjugated Goat anti-Mouse IgG secondary antibody was then used.



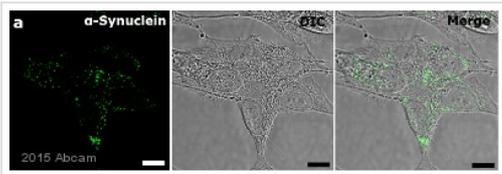
Flow Cytometry - Anti-Alpha-synuclein antibody [LB 509] (ab27766)

Overlay histogram showing PC12 (NGF differentiated) cells stained with ab27766 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab27766, 1 µg/1x10<sup>6</sup>) for 30 min at 22°C. The secondary antibody used was Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) preadsorbed (ab150117) at 1/2000 dilution for 30 min at 22°C.

Isotype control antibody (black line) was Mouse IgG1 [15-6E10A7] (ab170190) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50mW Blue

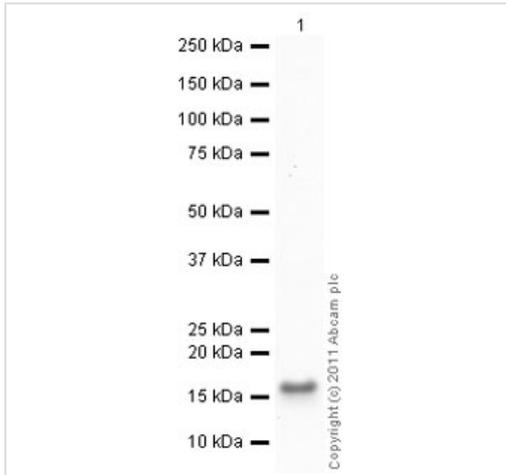
laser (488nm) and 530/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-Alpha-synuclein antibody [LB 509] (ab27766)

This image is courtesy of an anonymous Abreview

SH-SY5Y neuroblastoma cells stained for alpha-synuclein (green) using ab27766 in immunofluorescence. SH-SY5Y cells were fixed with paraformaldehyde, permeabilized with 0.5% Tween-20 and blocked with 10% serum for 1 hour at room temperature. Samples were incubated with ab27766 (diluted at 1/300) for 1 hour. An Alexa Fluor® 488-conjugated Goat anti-mouse IgG polyclonal was used as the secondary antibody (diluted at 1/200).



Western blot - Anti-Alpha-synuclein antibody [LB 509] (ab27766)

Anti-Alpha-synuclein antibody [LB 509] (ab27766) at 1/1000 dilution + Recombinant Human Alpha-synuclein protein (ab51189) at 0.1 µg

### Secondary

Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 5000 µg

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 14 kDa

**Exposure time:** 8 minutes

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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