

Product datasheet

Anti-Alpha-synuclein antibody [LB 509] ab27766

★★★★★ 11 Abreviews 64 References 3 Images

Overview

Product name	Anti-Alpha-synuclein antibody [LB 509]
Description	Mouse monoclonal [LB 509] to Alpha-synuclein
Host species	Mouse
Tested applications	Suitable for: WB, Flow Cyt
Species reactivity	Reacts with: Rat, Human, Recombinant fragment
Immunogen	Full length protein. This information is proprietary to Abcam and/or its suppliers.
Epitope	ab27766 reacts with an epitope located in the region encoded by amino acids 115-122 of alpha-synuclein.
Positive control	WB: Recombinant human Alpha-synuclein protein. Flow Cyt: PC12 (NGF differentiated) cells.
General notes	<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>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <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&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Purity	Protein G purified
Clonality	Monoclonal
Clone number	LB 509
Isotype	IgG1

Applications

The Abpromise guarantee 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.

Application	Abreviews	Notes
WB	★★★★★ (3)	1/100 - 1/1000. Predicted molecular weight: 14 kDa.
Flow Cyt		Use 1 µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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.

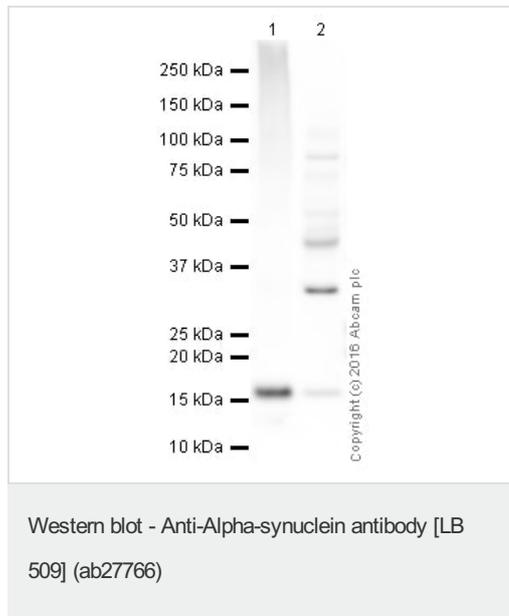
Ubiquitinated. The predominant conjugate is the diubiquitinated form.

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 antibody [LB 509] (ab27766) at 5 $\mu\text{g/ml}$

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.

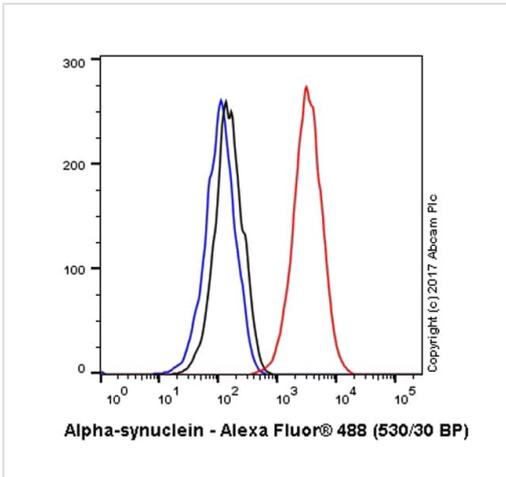
Performed under reducing conditions.

Predicted band size: 14 kDa

Observed band size: 16 kDa

Additional bands at: 32 kDa (possible dimer)

Exposure time: 20 minutes



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/1x10⁶) 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.



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

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