abcam

Product datasheet

Anti-Alpha-synuclein (phospho S129) antibody [MJF-R13 (8-8)] - BSA and Azide free ab209421

Recombinant RabMAb

2 Images

Overview

Product name	Anti-Alpha-synuclein (phospho S129) antibody [MJF-R13 (8-8)] - BSA and Azide free
Description	Rabbit monoclonal [MJF-R13 (8-8)] to Alpha-synuclein (phospho S129) - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB **Unsuitable for:** Flow Cyt,ICC/IF,IHC-P or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human Alpha-synuclein (phospho S129).
Positive control	Recombinant alpha-synuclein, expressed in BL21 bacterial cells in the presence of Human Polo-Like Kinase 2; HEK whole cell lysates, stably-transfected with Polo-Like Kinase 2 and alpha Synuclein.
General notes	ab209421 is the carrier-free version of ab168381. Alpha-synuclein was the first gene to be linked to Parkinson's disease (PD) and remains the most promising link to PD pathogenesis, where there is genetic evidence that it may play a causal role. In the brain, alpha-synuclein 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. Recent studies also indicate that alpha-synuclein undergoes post-translational modification. Though the role of many of these modifications is still under investigation, phosphorylation at Serine 129 may affect alpha-synuclein aggregations and may also serve as marker of disease pathogenesis. With the advent of this phospho-specific Serine 129 antibody, The Michael J. Fox Foundation hopes to ensure that the putative role of this modification can be further examined by all researchers. Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes,

oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

This antibody was developed with support from The Michael J. Fox Foundation.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	MJF-R13 (8-8)
Isotype	IgG

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab209421 in the following tested applications.

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

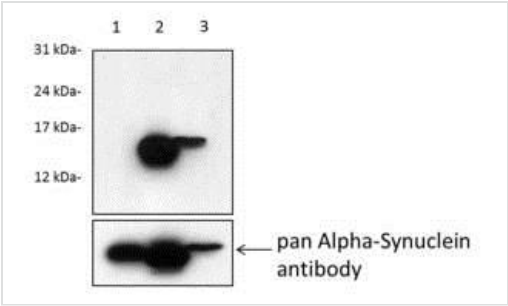
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 14 kDa.

Application notes Is unsuitable for Flow Cyt,ICC/IF,IHC-P or IP.

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



Western blot - Anti-Alpha-synuclein (phospho S129) antibody [MJF-R13 (8-8)] - BSA and Azide free (ab209421)

This image is courtesy of Drs. Shyra Gardai and Jennifer Johnston (Elan Pharmaceuticals)

All lanes : Anti-Alpha-synuclein (phospho S129) antibody [MJF-R13 (8-8)] (ab168381) at 1/1000 dilution

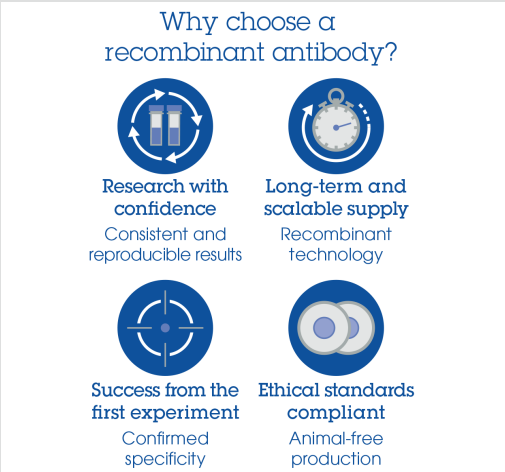
Lane 1 : Recombinant alpha Synuclein expressed in BL21 bacterial cells

Lane 2 : Recombinant alpha Synuclein expressed in BL21 bacterial cells, in the presence of Human Polo-Like Kinase 2

Lane 3 : HEK whole cell lysates, stably-transfected with Polo-Like Kinase 2 and alpha Synuclein

Predicted band size: 14 kDa

This data was developed using ab168381, the same antibody clone in a different buffer formulation.



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