Product datasheet

Anti-Alpha-synuclein antibody [syn211] ab80627

Overview

Product name
Anti-Alpha-synuclein antibody [syn211]

Description
Mouse monoclonal [syn211] to Alpha-synuclein

Host species
Mouse

Tested applications
Suitable for: Flow Cyt, WB, IP, IHC-P

Species reactivity
Reacts with: Human

Does not react with: Mouse, Rat

Immunogen
Recombinant full length protein corresponding to Human Alpha-synuclein. Human recombinant alpha Synuclein.

Positive control
Brain.

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
Constituent: 0.0268% PBS

Purity
Protein G purified

Clonality
Monoclonal

Clone number
syn211

Isotype
IgG1

Applications

Our Abpromise guarantee covers the use of ab80627 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Cyt</td>
<td>ab170190</td>
<td>Use 1µg for 10^6 cells.</td>
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</tbody>
</table>

ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
**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**


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<thead>
<tr>
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<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 14 kDa. PubMed: 10679792</td>
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<tr>
<td>IP</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-P</td>
<td>1/400. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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</tbody>
</table>
Overlay histogram showing SH-SY5Y cells stained with ab80627 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab80627, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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