**Anti-Alpha-synuclein antibody ab52168**

- **4 Abreviews**
- **6 References**
- **2 Images**

**Description**

- **Product Name:** Anti-Alpha-synuclein antibody
- **Species:** Rabbit
- **Specificity:** Due to 83% sequence homology, ab52168 might react with Beta synuclein.
- **Applications:** ELISA, IHC-P, WB
- **Antigen:** Synthetic peptide corresponding to Human Alpha-synuclein. Synthetic non-phosphopeptide derived from human alpha Synuclein around the phosphorylation site of tyrosine 133 (E-G-Y-Q-D).
- **Stability:** Extracts from RAW264.7 cells, treated with LPS.

**Specifications**

- **Form:** Liquid
- **Stability:** Shipped at 4°C. Upon delivery, aliquot and store at -20°C. Avoid freeze/thaw cycles.
- **Composition:** pH: 7.40, Preservative: 0.02% Sodium azide, Constituents: PBS, 50% Glycerol, 0.87% Sodium chloride.
- **Purity:** Immunogen affinity purified
- **Isotype:** IgG

**Application**

Our Abpromise guarantee covers the use of ab52168 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>Ab Dilution</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ELISA</td>
<td>1/20000</td>
<td>Can be paired for ELISA with Recombinant human Alpha-synuclein protein (Active) (ab218819).</td>
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### 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.

### Disease Related
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 Similarity
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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<td>IHC-P</td>
<td>Use a concentration of 4 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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Ab52168 staining human dentate nuleus. Staining is localised to the cytoplasm and nucleus.

Left panel: with primary antibody at 4 ug/ml. Right panel: isotype control.

Sections were stained using an automated system DAKO Autostainer Plus, at room temperature. Sections were rehydrated and antigen retrieved with the DAKO 3-in-1 antigen retrieval buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be r

Anti-Alpha-synuclein antibody (ab52168) at 1/1000 dilution + Lysate prepared from whole SHSY5Y cells at 5 µg

**Secondary**
IRDye® 800CW-conjugated donkey polyclonal to rabbit IgG at 1/3000 dilution

Performed under reducing conditions.

**Predicted band size:** 14 kDa
**Observed band size:** 15 kDa

why is the actual band size different from the predicted?

**Exposure time:** 1 minute

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