Product datasheet

Anti-Synaptophysin antibody ab14692

Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-Synaptophysin antibody</th>
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</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit polyclonal to Synaptophysin</td>
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<tr>
<td>Host species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Specificity</td>
<td>The antibody does not cross-react other synaptic vesicle proteins such as synaptotagmin, GAP45, and SNAP25 proteins.</td>
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<tr>
<td>Tested applications</td>
<td>Suitable for: WB, IP, IHC-FoFr, IHC-Fr, ICC/IF, IHC-P</td>
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<tr>
<td>Species reactivity</td>
<td>Reacts with: Mouse, Rat, Cow, Human, Chimpanzee</td>
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<tr>
<td>Immunogen</td>
<td>Synthetic peptide corresponding to Human Synaptophysin aa 41-62. Sequence: FATCGSYSGELQLSVDCANKTE</td>
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<tr>
<td>Positive control</td>
<td>WB: Mouse brain tissue lysate. IHC-P: Rat brain tissue.</td>
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</tbody>
</table>

Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.</td>
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<tr>
<td>Storage buffer</td>
<td>Preservative: 0.02% Sodium azide</td>
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<tr>
<td>Purity</td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
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Applications

Our Abpromise guarantee covers the use of ab14692 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function
Possibly involved in structural functions as organizing other membrane components or in targeting the vesicles to the plasma membrane. Involved in the regulation of short-term and long-term synaptic plasticity.

Tissue specificity
Characteristic of a type of small (30-80 nm) neurosecretory vesicles, including presynaptic vesicles, but also vesicles of various neuroendocrine cells of both neuronal and epithelial phenotype.

Involvement in disease
Mental retardation, X-linked, SYP-related

Sequence similarities
Belongs to the synaptophysin/synaptobrevin family. Contains 1 MARVEL domain.

Domain
The calcium-binding activity is thought to be localized in the cytoplasmic tail of the protein.

Post-translational modifications
Ubiquitinated; mediated by SIAH1 or SIAH2 and leading to its subsequent proteasomal degradation.

Cellular localization

Application | Abreviews | Notes
--- | --- | ---
WB | 1/200 - 1/1000. Detects a band of approximately 42 kDa (predicted molecular weight: 38 kDa). | |
IP | 1/250. | |
IHC-FoFr | 1/500. PubMed: 24846136 | |
IHC-Fr | ★★★★★ | Use at an assay dependent concentration. |
ICC/IF | ★★★★★ | 1/200. |
IHC-P | ★★★★☆ | 1/1000. PubMed: 19096824 |
Immunohistochemical analysis of formaldehyde-fixed, paraffin-embedded human CNS sections labelling Synaptophysin with ab14692 at a dilution of 1/1000. The secondary antibody used was biotin conjugated polyclonal goat vector at 1/250. Antigen retrieval was heat mediated using citrate.

ab14692 staining Synaptophysin in mouse retina (8 weeks old) and brain tissue sections by Immunohistochemistry (IHC-Fr - frozen sections). 10µm frozen sections were fixed with 4% paraformaldehyde for 10 minutes and blocked with 10% donkey serum for 20 minutes at room temperature. Samples were incubated with primary antibody (1/100 in PBS) overnight at 4°C. An Alexa Fluor 488®-conjugated donkey anti-rabbit IgG polyclonal (1/1000 in PBS) was used as the secondary antibody (1 hour at room temperature). Counterstained with Hoechst 33258 (blue) for 10 minutes at room temperature.

Images shows: GCL - ganglion cell layer, IPL - inner plexiform layer, INL - inner nuclear layer, OPL - outer plexiform layer, ONL - outer nuclear layer; DG - dentate gyrus region of the hippocampus.

Synaptophysin antibody (ab14692) western blot on mouse forebrain extract (10µg protein/lane). The blot was exposed for 10 minutes to autoradiographic film. Ladder markers from 7-194 kDa.

Lane 1 = 1/500 ab14692
Lane 2 = 1/200 ab14692
ab14692 staining cultured ED18 rat primary hippocampal neurons by ICC/IF. The cultured cells were fixed with 4% paraformaldehyde for 5 minutes and blocked with 10% donkey serum in 0.1% PBS-0.3% TritonX for 30 minutes at 24°C. The cultured cells were then stained with ab14692 at 1/200 in 0.3% TritonX with 0.1% PBS and 10% donkey serum for overnight at 4°C. An Alexa Fluor 488 donkey anti-rabbit polyclonal antibody at 1/1000 was used as the secondary antibody. Nuclei were stained with 1.43µM Hoechst and can be observed in blue. Synaptophysin expressed in axon, dendrites and particularly carrying in the vesicles.

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