

DESCRIPTION

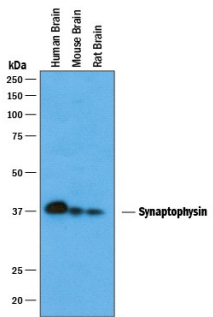
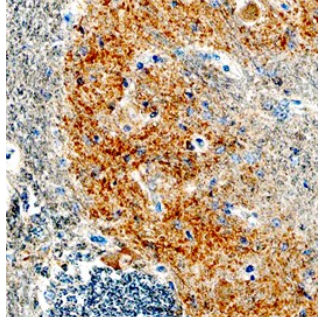
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| Species Reactivity | Human |
| Specificity | Detects human Synaptophysin in direct ELISAs and Western blots. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human Synaptophysin Glu50-Phe106 Accession # P08247 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

| | Recommended Concentration | Sample |
|-----------------------------|----------------------------------|---------------|
| Western Blot | 1 µg/mL | See Below |
| Immunohistochemistry | 5-15 µg/mL | See Below |

DATA

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| <p>Western Blot</p>  | <p>Detection of Human, Mouse, and Rat Synaptophysin by Western Blot. Western blot shows lysates of human brain tissue, mouse brain tissue, and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Synaptophysin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5555) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Synaptophysin at approximately 38 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p> | <p>Immunohistochemistry</p>  <p>Synaptophysin in Human Brainstem Tissue. Synaptophysin was detected in immersion fixed paraffin-embedded sections of human brainstem tissue using Goat Anti-Human Synaptophysin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5555) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to olivary nucleus. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections. *Not recommended for Immunohistochemistry/Immunocytochemistry on mouse and rat samples.</p> |
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PREPARATION AND STORAGE

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| Reconstitution | Reconstitute at 0.2 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

Synaptophysin (also p38 and BM89 in mouse) is a 38-40 kDa member of the synaptophysin/synaptobrevin family of proteins. It is expressed in neurons, and interacts with VAMP2 at an early stage of vesicle formation, guiding VAMP2 placement into secretory vesicles that are destined for release upon stimulation. Human Synaptophysin is a four transmembrane protein that is 313 amino acids (aa) in length. It contains two luminal domains (aa 50-106 and 162-199) and a cytoplasmic C-terminal targeting region that specifies its localization (aa 214-313). Synaptophysin forms homodimers and oligomers, and heterodimerizes with VAMP2. There is one isoform variant that shows a six aa substitution for aa 35-313. Over aa 50-106, human Synaptophysin shares 89% aa identity with mouse Synaptophysin.