

DESCRIPTION

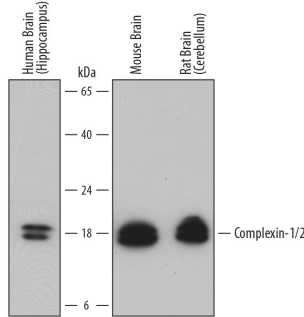
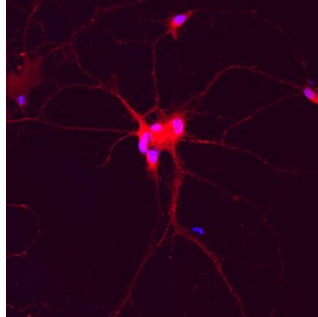
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| Species Reactivity | Human/Mouse/Rat |
| Specificity | Detects human, mouse, and rat Complexin-1 in direct ELISAs and Western blots. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human Complexin-1 Met1-Lys134 Accession # O14810 |
| 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 | 0.5 µg/mL | See Below |
| Immunocytochemistry | 5-15 µg/mL | See Below |

DATA

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| <p>Western Blot</p>  <p>Detection of Human, Mouse, and Rat Complexin-1/2 by Western Blot. Western blot shows lysates of human brain (hippocampus) tissue, mouse brain tissue, and rat brain (cerebellum) tissue. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human/Mouse/Rat Complexin-1/2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7787) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). Specific bands were detected for Complexin-1/2 at approximately 17-19 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p> | <p>Immunocytochemistry</p>  <p>Complexin-1/2 in Rat Hippocampal Neurons. Complexin-1/2 was detected in immersion fixed rat hippocampal neurons (14 days <i>in vitro</i>) using Goat Anti-Human/Mouse/Rat Complexin-1/2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7787) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p> |
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PREPARATION AND STORAGE

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| Reconstitution | Sterile PBS to a final concentration of 0.2 mg/mL. |
| 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

Complexin-1 (CPX I; also synaphin-2) is a 17-18 kDa, cytosolic protein that belongs to the complexin/synaphin family, complexin-1/2 subfamily of molecules. It is expressed in select neurons and pancreatic β-cells, and serves as a block against premature neurotransmitter/insulin granule release. Both Complexin-1 and Complexin-2 bind to the SNARE complex that contains SNAP25, VAMP2 and STX1A, generating oligomers of SNARE complexes that are optimally oriented relative to the positions of vesicle and plasma membranes. This effectively places synaptic vesicles in an optimal configuration, allowing for a coordinated, uniform fusion and release upon appropriate stimulus. Typically, complexin-1 is described as a clamp that blocks (vesicle) fusion, and the stimulus that overcomes it is one that induces an influx of synaptotagmin-detectable calcium. Human complexin-1 is 134 amino acids (aa) in length. It contains one coiled-coil domain (aa 29-69) that incorporates part of a SNARE complex interaction sequence (aa 48-70). Full-length human complexin-1 shares 97% aa sequence identity with mouse complexin-1.