

# Complexin-1/2 (N-14): sc-14528

## BACKGROUND

Complexin 1 and Complexin 2, also designated Synaphin 1 and Synaphin 2, contain an  $\alpha$ -helical middle domain of approximately 58 amino acids. Complexin 1 and Complexin 2 are expressed in presynaptic terminals of inhibitory and excitatory hippocampal neurons, respectively, and in cytoplasmic pools during early stages of development. Complexins promote SNARE (soluble N-ethylmaleimide-sensitive factor attachment protein receptors) precomplex formation by binding to synapxin with its  $\alpha$ -helical domain. Complexins are important regulators of transmitter release at a late step in calcium dependent neurotransmitter release or immediately after the calcium-triggering step of fast synchronous transmitter release and preceding vesicle fusion. Neurons lacking complexins show reduced transmitter release efficiency due to decreased calcium sensitivity of the synaptic secretion process. Complexin 2 may play a role in only LTP (long term potentiation) following tetanic stimulation. A progressive loss of Complexin 2 occurs in the brains of mice carrying the Huntington disease mutation, an autosomal dominant neurodegenerative disorder. Changes in the neurotransmitter release might contribute to the motor, emotional and cognitive dysfunctions seen in these mice.

## REFERENCES

- McMahon, H.T., et al. 1995. Complexins: cytosolic proteins that regulate SNAP receptor function. *Cell* 83: 111-119.
- Pabst, S., et al. 2000. Selective interaction of complexin with the neuronal SNARE complex. *J. Biol. Chem.* 275: 19808-19818.
- Eastwood, S.L., et al. 2000. Hippocampal synaptic pathology in schizophrenia, bipolar disorder and major depression: a study of complexin mRNAs. *Mol. Psychiatry* 5: 425-432.
- Huang, G.Z., et al. 2000. Involvement of complexin II in synaptic plasticity in the CA1 region of the hippocampus: the use of complexin II-lacking mice. *Jpn. J. Pharmacol.* 84: 179-187.
- Tokumaru, H., et al. 2001. SNARE complex oligomerization by Synaphin/Complexin is essential for synaptic vesicle exocytosis. *Cell* 104: 421-432.

## CHROMOSOMAL LOCATION

Genetic locus: CPLX1 (human) mapping to 4p16.3, CPLX2 (human) mapping to 5q35.2; Cplx1 (mouse) mapping to 5 F, Cplx2 (mouse) mapping to 13 B1.

## SOURCE

Complexin-1/2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Complexin-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14528 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Complexin-1/2 (N-14) is recommended for detection of Complexin-1 and Complexin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

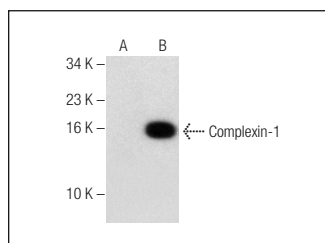
Molecular Weight of Complexin-1/2: 15 kDa.

Positive Controls: Complexin-1 (h): 293T Lysate: sc-110107 or mouse brain extract: sc-2253.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Complexin-1/2 (N-14): sc-14528. Western blot analysis of Complexin-1 expression in non-transfected: sc-117752 (A) and human Complexin-1 transfected: sc-110107 (B) 293T whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

**MONOS**  
Satisfaction  
Guaranteed

Try **Complexin-1/2 (D-9): sc-365152** or **Complexin-1/2 (B-9): sc-514321**, our highly recommended monoclonal alternatives to Complexin-1/2 (N-14).