

Complexin-3 (A-9): sc-365942

BACKGROUND

Members of the Complexin protein family promote SNARE (soluble N-ethylmaleimide-sensitive factor attachment protein receptors) precomplex formation by binding to Syntaxin via an α -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. Neurons lacking Complexins show reduced transmitter release efficiency due to decreased calcium sensitivity of the synaptic secretion process. Complexin-3, also known as CPXIII, CPX-III, Nbla11589 or CPLX3, is a 158 amino acid member of the Complexin/synaphin family. Complexin-3 is involved in the regulation of synaptic vesicle exocytosis. Complexin-3 binds to the SNARE core complex containing SNAP 25, VAMP-2 and Syntaxin 1.

REFERENCES

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- 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.
- Eastwood, S.L. and Harrison, P.J. 2000. Hippocampal synaptic pathology in schizophrenia, bipolar disorder and major depression: a study of Complexin mRNAs. *Mol. Psychiatry* 5: 425-432.
- Reim, K., et al. 2001. Complexins regulate a late step in Ca^{2+} -dependent neurotransmitter release. *Cell* 104: 71-81.
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- Yoon, T.Y., et al. 2008. Complexin and Ca^{2+} stimulate SNARE-mediated membrane fusion. *Nat. Struct. Mol. Biol.* 15: 707-713.
- Xue, M., et al. 2008. Complexins facilitate neurotransmitter release at excitatory and inhibitory synapses in mammalian central nervous system. *Proc. Natl. Acad. Sci. USA* 105: 7875-7880.

CHROMOSOMAL LOCATION

Genetic locus: CPLX3 (human) mapping to 15q24.1; Cplx3 (mouse) mapping to 9 B.

SOURCE

Complexin-3 (A-9) is a mouse monoclonal antibody raised against amino acids 1-44 mapping at the N-terminus of Complexin-3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Complexin-3 (A-9) is recommended for detection of Complexin-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Complexin-3 (A-9) is also recommended for detection of Complexin-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Complexin-3 siRNA (h): sc-90105, Complexin-3 siRNA (m): sc-142490, Complexin-3 shRNA Plasmid (h): sc-90105-SH, Complexin-3 shRNA Plasmid (m): sc-142490-SH, Complexin-3 shRNA (h) Lentiviral Particles: sc-90105-V and Complexin-3 shRNA (m) Lentiviral Particles: sc-142490-V.

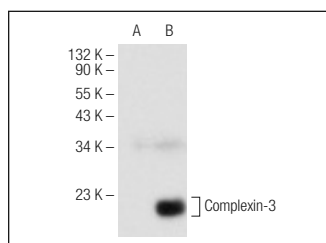
Molecular Weight of Complexin-3: 18 kDa.

Positive Controls: mouse brain extract: sc-2253, Complexin-3 (m): 293T Lysate: sc-119381 or mouse spleen extract: sc-2391.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Complexin-3 (A-9): sc-365942. Western blot analysis of Complexin-3 expression in non-transfected: sc-117752 (A) and mouse Complexin-3 transfected: sc-119381 (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.