SANTA CRUZ BIOTECHNOLOGY, INC.

X11α (H-265): sc-14032

BACKGROUND

The β-Amyloid precursor protein (β-APP) is a major constituent of the amyloid deposits in patients with Alzheimer's disease. The β-Amyloid precursor is known to interact with several proteins, including X11 and the G heterotrimetric protein APP-BP1. The neuronal, transmembrane protein X11 is known to bind to the β-Amyloid precursor protein via a phosphotyrosine binding (PTB) domain, reducing the secretion of cellular β-APP and slowing β-APP processing pathways. X11 binds specifically to the YENPTY motif, which is involved in the internalization of β-APP. Multiple splice varitents of X11 have been identified, including X11α (also designated Mint 1), X11β (Mint 2) and X11γ (Mint 3).

REFERENCES

1. Borg, J.P., et al. 1996. The phosphotyrosine interaction domains of X11 and FE65 bind to distinct sites on the YENPTY motif of amyloid precursor protein. Mol. Cell. Biol. 16: 6229-6241.
2. Okamoto, M., et al. 1997. Mints, Munc18-interacting proteins in synaptic vesicle exocytosis. J. Biol. Chem. 272: 31459-31464.

CHROMOSOMAL LOCATION

Genetic locus: APBA1 (human) mapping to 9q21.11; Apba1 (mouse) mapping to 19 B.

SOURCE

X11α (H-265) is a rabbit polyclonal antibody raised against amino acids 1-265 mapping near the N-terminus of X11α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

X11α (H-265) is recommended for detection of X11α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

X11α (H-265) is also recommended for detection of X11α in additional species, including bovine and canine.

Suitable for use as control antibody for X11α siRNA (h): sc-36851, X11α siRNA (m): sc-36852, X11α shRNA Plasmid (h): sc-36851-SH, X11α shRNA Plasmid (m): sc-36852-SH, X11α shRNA (h) Lentiviral Particles: sc-36851-V and X11α shRNA (m) Lentiviral Particles: sc-36852-V.

Molecular Weight (predicted) of X11α: 93 kDa.

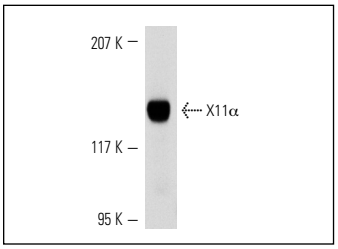
Molecular Weight (observed) of X11α: 120-156 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

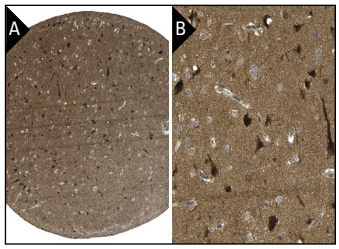
STORAGE

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

DATA



X11α (H-265): sc-14032. Western blot analysis of X11α expression in mouse brain tissue extract.



X11α (H-265): sc-14032. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic and nuclear staining of neuronal and glial cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATION

1. Zhang, W., et al. 2004. Mint1, a Munc-18-interacting protein, is expressed in Insulin-secreting β-cells. Biochem. Biophys. Res. Commun. 320: 717-721.
2. Xie, Z., et al. 2005. RNA interference-mediated silencing of X11α and X11β attenuates amyloid β-protein levels via differential effects on β-Amyloid precursor protein processing. J. Biol. Chem. 280: 15413-15421.
3. Samuels, B.A., et al. 2007. Cdk5 promotes synaptogenesis by regulating the subcellular distribution of the MAGUK family member CASK. Neuron 56: 823-837.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.