SANTA CRUZ BIOTECHNOLOGY, INC.

X11γ (D-3): sc-376926

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.
3. Zhang, Z., et al. 1997. Sequence-specific recognition of the internalization motif of the Alzheimer's amyloid precursor protein by the X11 PTB domain. EMBO J. 16: 6141-6150.
4. Russo, T., et al. 1998. Fe65 and the protein network centered around the cytosolic domain of the Alzheimer's β-Amyloid precursor protein. FEBS Lett. 434: 1-7.
5. Borg, J.P., et al. 1998. The X11α protein slows cellular amyloid precursor protein processing and reduces Aβ40 and Aβ42 secretion. J. Biol. Chem. 273: 14761-14766.
6. Sastre, M., et al. 1998. X11 interaction with β-Amyloid precursor protein modulates its cellular stabilization and reduces Amyloid β-protein secretion. J. Biol. Chem. 273: 22351-22357.

CHROMOSOMAL LOCATION

Genetic locus: Apba3 (mouse) mapping to 10 C1.

SOURCE

X11γ (D-3) is a mouse monoclonal antibody raised against amino acids 1-165 mapping at the N-terminus of X11γ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

X11γ (D-3) is recommended for detection of x11γ of mouse origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for X11γ siRNA (m): sc-36848, X11γ shRNA Plasmid (m): sc-36848-SH and X11γ shRNA (m) Lentiviral Particles: sc-36848-V.

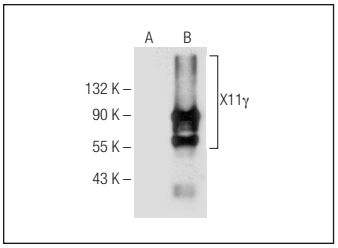
Molecular Weight of X11γ: 89 kDa.

Positive Controls: mouse brain extract: sc-2253 or X11γ (m): 293T Lysate: sc-124660.

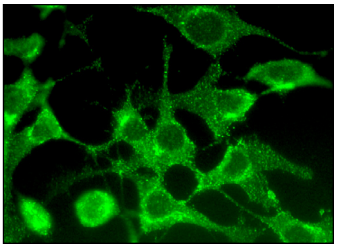
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



X11γ (D-3): sc-376926. Western blot analysis of X11γ expression in non-transfected: sc-117752 (**A**) and mouse X11γ transfected: sc-124660 (**B**) 293T whole cell lysates.



X11γ (D-3): sc-376926. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

RESEARCH USE

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