



X11 β (S-20): sc-31512

BACKGROUND

Amyloid β precursor protein (β APP) is a major constituent of the amyloid deposits in patients with Alzheimer's disease. The amyloid β precursor is known to interact with several proteins, including the G₀ heterotrimeric protein, APP-BP1 and X11. The neuronal, transmembrane protein X11 is known to bind to the amyloid β 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 variants of X11 have been identified, including X11 α , β and γ (also known as Mint 1, 2 and 3, respectively).

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 X11 α protein slows cellular amyloid precursor protein processing and reduces A β 40 and A β 42 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: APBA2 (human) mapping to 15q11-q12; Apba2 (mouse) mapping to 7 C.

SOURCE

X11 β (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of X11 β of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31512 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

X11 β (S-20) is recommended for detection of X11 β of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 X11 β siRNA (m): sc-36850.

Molecular Weight of X11 β : 135 kDa.

Positive Controls: H4 cell lysate: sc-2408 or IMR-32 cell lysate: sc-2409.

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) 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.

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.