SANTA CRUZ BIOTECHNOLOGY, INC.

X11β (M-18): sc-23837

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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: Apba2 (mouse) mapping to 7 C.

SOURCE

X11β (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of X11β of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-23837 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

X11β (M-18) is recommended for detection of X11β of mouse and rat 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).

X11β (M-18) is also recommended for detection of X11β in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for X11β siRNA (m): sc-36850, X11β shRNA Plasmid (m): sc-36850-SH and X11β shRNA (m) Lentiviral Particles: sc-36850-V.

Molecular Weight of X11β: 135 kDa.

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.