

# X11 $\beta$ (C-7): sc-376566

## BACKGROUND

The  $\beta$ -Amyloid precursor protein ( $\beta$ -APP) is a major constituent of the amyloid deposits in patients with Alzheimer's disease. The  $\beta$ -Amyloid precursor is known to interact with several proteins, including X11 and the G heterotrimeric protein APP-BP1. The neuronal, transmembrane protein X11 is known to bind to the  $\beta$ -Amyloid precursor protein via a phosphotyrosine binding (PTB) domain, reducing the secretion of cellular  $\beta$ -APP and slowing  $\beta$ -APP processing pathways. X11 binds specifically to the YENPTY motif, which is involved in the internalization of  $\beta$ -APP. Multiple splice variants of X11 have been identified, including X11 $\alpha$  (also designated Mint 1), X11 $\beta$  (Mint 2) and X11 $\gamma$  (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  $\beta$ -Amyloid precursor protein. *FEBS Lett.* 434: 1-7.
5. Borg, J.P., et al. 1998. The X11 $\alpha$  protein slows cellular amyloid precursor protein processing and reduces A $\beta$ 40 and A $\beta$ 42 secretion. *J. Biol. Chem.* 273: 14761-14766.
6. Sastre, M., et al. 1998. X11 interaction with  $\beta$ -Amyloid precursor protein modulates its cellular stabilization and reduces Amyloid  $\beta$ -protein secretion. *J. Biol. Chem.* 273: 22351-22357.

## CHROMOSOMAL LOCATION

Genetic locus: APBA2 (human) mapping to 15q13.1.

## SOURCE

X11 $\beta$  (C-7) is a mouse monoclonal antibody raised against a peptide mapping at the N-terminus of X11 $\beta$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376566 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## 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 $\beta$  (C-7) is recommended for detection of X11 $\beta$  of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for X11 $\beta$  siRNA (h): sc-36849, X11 $\beta$  shRNA Plasmid (h): sc-36849-SH and X11 $\beta$  shRNA (h) Lentiviral Particles: sc-36849-V.

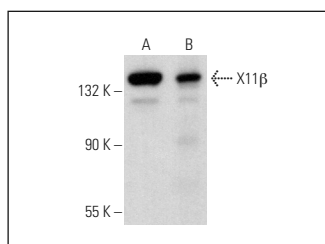
Molecular Weight of X11 $\beta$ : 135 kDa.

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

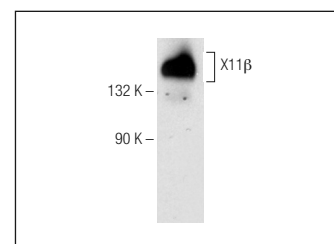
## RECOMMENDED SUPPORT REAGENTS

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

## DATA



X11 $\beta$  (C-7): sc-376566. Western blot analysis of X11 $\beta$  expression in IMR-32 whole cell lysate (A) and human cerebral cortex tissue extract (B).



X11 $\beta$  (C-7): sc-376566. Western blot analysis of X11 $\beta$  expression in H4 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.