

X11 α (A-12): sc-137022

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 heterotrimeric 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 variants of X11 have been identified, including X11 α (also designated Mint 1), X11 β (Mint 2) and X11 γ (Mint 3).

REFERENCES

- 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.
- Okamoto, M., et al. 1997. Mints, Munc18-interacting proteins in synaptic vesicle exocytosis. *J. Biol. Chem.* 272: 31459-31464.
- 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.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

X11 α (A-12) is a mouse monoclonal antibody raised against amino acids 1-265 mapping near the N-terminus of X11 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

X11 α (A-12) is available conjugated to agarose (sc-137022 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137022 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137022 PE), fluorescein (sc-137022 FITC), Alexa Fluor[®] 488 (sc-137022 AF488), Alexa Fluor[®] 546 (sc-137022 AF546), Alexa Fluor[®] 594 (sc-137022 AF594) or Alexa Fluor[®] 647 (sc-137022 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-137022 AF680) or Alexa Fluor[®] 790 (sc-137022 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 α (A-12) is recommended for detection of X11 α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 α siRNA (h): sc-36851, X11 α siRNA (m): sc-36852, X11 α shRNA Plasmid (h): sc-36851-SH, X11 α shRNA Plasmid (m): sc-36852-SH, X11 α shRNA (h) Lentiviral Particles: sc-36851-V and X11 α shRNA (m) Lentiviral Particles: sc-36852-V.

Molecular Weight (predicted) of X11 α : 93 kDa.

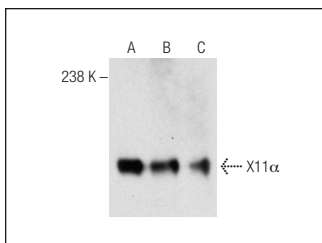
Molecular Weight (observed) of X11 α : 120-156 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

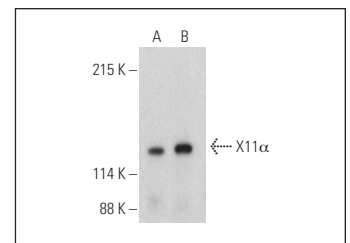
RECOMMENDED SUPPORT REAGENTS

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



X11 α (A-12): sc-137022. Western blot analysis of X11 α expression in rat cerebellum (A), rat brain (B) and mouse brain (C) tissue extracts.



X11 α (A-12): sc-137022. Western blot analysis of X11 α expression in mouse brain (A) and rat brain (B) tissue extracts. Detection reagent used: m-IgG_{2a} BP-HRP: sc-542731.

SELECT PRODUCT CITATIONS

- Chung, Y., et al. 2020. Mint3 is dispensable for pancreatic and kidney functions in mice. *Biochem. Biophys. Rep.* 24: 100872.

RESEARCH USE

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