

α -Adaptin 2 (F-12): sc-55497

BACKGROUND

Clathrin-coated pits and vesicles are assembled for receptor-mediated endocytosis through interaction with clathrin associated protein complexes. Vesicle transport is mediated from the *trans*-Golgi network by the adapter complex AP-1 and from the plasma membrane by the AP-2 complex. The AP-1 and AP-2 adapter protein complexes consist of clathrin binding adaptin proteins (γ -Adaptin and β -Adaptin for AP-1; α -Adaptin 1, α -Adaptin 2 and β 2-Adaptin for AP-2) and two smaller subunits known as AP50 and AP17. The α - and β -Adaptin chains have a similar two-domain organization with C-terminal domains that vary in both sequence and length. α -Adaptin splice variants 1 and 2 display variable relative expression levels and differential distribution in different tissues. AP180 (also designated AP-3 or F1-20) is a synapse-specific clathrin assembly protein. The protein CALM (clathrin assembly protein lymphoid myeloid leukemia) is highly homologous to AP180 and may also be involved in clathrin assembly.

CHROMOSOMAL LOCATION

Genetic locus: AP2A2 (human) mapping to 11p15.5; Ap2a2 (mouse) mapping to 7 F5.

SOURCE

α -Adaptin 2 (F-12) is a mouse monoclonal antibody raised against amino acids 678-938 of α -Adaptin 2 of mouse 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.

α -Adaptin 2 (F-12) is available conjugated to agarose (sc-55497 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55497 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55497 PE), fluorescein (sc-55497 FITC), Alexa Fluor[®] 488 (sc-55497 AF488), Alexa Fluor[®] 546 (sc-55497 AF546), Alexa Fluor[®] 594 (sc-55497 AF594) or Alexa Fluor[®] 647 (sc-55497 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-55497 AF680) or Alexa Fluor[®] 790 (sc-55497 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

α -Adaptin 2 (F-12) is recommended for detection of α -Adaptin 2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with α -Adaptin 1.

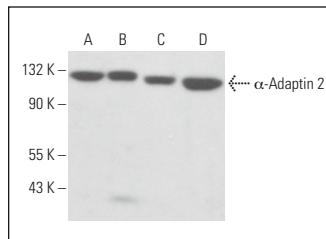
Suitable for use as control antibody for α -Adaptin 2 siRNA (h): sc-43505, α -Adaptin 2 siRNA (m): sc-29611, α -Adaptin 2 shRNA Plasmid (h): sc-43505-SH, α -Adaptin 2 shRNA Plasmid (m): sc-29611-SH, α -Adaptin 2 shRNA (h) Lentiviral Particles: sc-43505-V and α -Adaptin 2 shRNA (m) Lentiviral Particles: sc-29611-V.

Molecular Weight of α -Adaptin 2: 100 kDa.

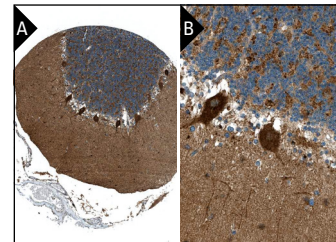
STORAGE

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

DATA



α -Adaptin 2 (F-12): sc-55497. Western blot analysis of α -Adaptin 2 expression in Hep G2 (A), Ca Ski (B), c4 (C) and AT3B-1 (D) whole cell lysates.



α -Adaptin 2 (F-12): sc-55497. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining in cells in molecular and granular layers and Purkinje cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Gerondopoulos, A., et al. 2010. Murine norovirus-1 cell entry is mediated through a non-clathrin-, non-caveolae-, dynamin- and cholesterol-dependent pathway. J. Gen. Virol. 91: 1428-1438.
- Buroker, N.E., et al. 2012. The adaptor-related protein complex 2, α 2 sub-unit (AP2 α 2) gene is a peroxisome proliferator-activated receptor cardiac target gene. Protein J. 31: 75-83.
- Garrison, A.R., et al. 2013. Crimean-Congo hemorrhagic fever virus utilizes a clathrin- and early endosome-dependent entry pathway. Virology 444: 45-54.
- López-Hernández, T., et al. 2022. Clathrin-independent endocytic retrieval of SV proteins mediated by the clathrin adaptor AP-2 at mammalian central synapses. Elife 11: e71198.
- Cresens, C., et al. 2023. Flat clathrin lattices are linked to metastatic potential in colorectal cancer. iScience 26: 107327.

RESEARCH USE

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

PROTOCOLS

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

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