

α -Adaptin 1/2 (C-8): sc-17771

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 A and C 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: AP2A1 (human) mapping to 19q13.33, AP2A2 (human) mapping to 11p15.5; Ap2a1 (mouse) mapping to 7 B2, Ap2a2 (mouse) mapping to 7 F5.

SOURCE

α -Adaptin 1/2 (C-8) is a mouse monoclonal antibody raised against amino acids 678-977 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 1/2 (C-8) is available conjugated to agarose (sc-17771 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17771 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17771 PE), fluorescein (sc-17771 FITC), Alexa Fluor® 488 (sc-17771 AF488), Alexa Fluor® 546 (sc-17771 AF546), Alexa Fluor® 594 (sc-17771 AF594) or Alexa Fluor® 647 (sc-17771 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17771 AF680) or Alexa Fluor® 790 (sc-17771 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

α -Adaptin 1/2 (C-8) is recommended for detection of α -Adaptin 1 and α -Adaptin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

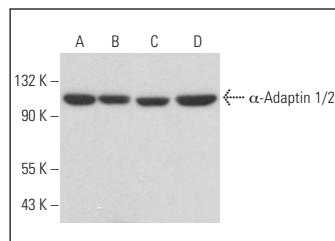
Suitable for use as control antibody for α -Adaptin 1/2 siRNA (h): sc-29610, α -Adaptin 1/2 siRNA (m): sc-43506, α -Adaptin 1/2 shRNA Plasmid (h): sc-29610-SH, α -Adaptin 1/2 shRNA Plasmid (m): sc-43506-SH, α -Adaptin 1/2 shRNA (h) Lentiviral Particles: sc-29610-V and α -Adaptin 1/2 shRNA (m) Lentiviral Particles: sc-43506-V.

Molecular Weight of α -Adaptin: 100 kDa.

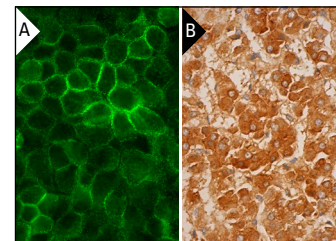
STORAGE

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

DATA



α -Adaptin 1/2 (C-8): sc-17771. Western blot analysis of α -Adaptin 1/2 expression in Hep G2 (A), Caki-1 (B), c4 (C) and MDA-MB-231 (D) whole cell lysates.



α -Adaptin 1/2 (C-8): sc-17771. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Hinrichsen, L., et al. 2003. Effect of Clathrin heavy chain- and α -Adaptin-specific small inhibitory RNAs on endocytic accessory proteins and receptor trafficking in HeLa cells. *J. Biol. Chem.* 278: 45160-45170.
- Hinrichsen, L., et al. 2006. Bending a membrane: how Clathrin affects budding. *Proc. Natl. Acad. Sci. USA* 103: 8715-8720.
- Roxrud, I., et al. 2008. An endosomally localized isoform of Eps15 interacts with Hrs to mediate degradation of epidermal growth factor receptor. *J. Cell Biol.* 180: 1205-1218.
- Rawet, M., et al. 2010. ArfGAP1 interacts with coat proteins through tryptophan-based motifs. *Biochem. Biophys. Res. Commun.* 394: 553-557.
- Gildea, J.J., et al. 2011. Inhibition of renal caveolin-1 reduces natriuresis and produces hypertension in sodium-loaded rats. *Am. J. Physiol. Renal Physiol.* 300: F914-F920.
- Mishra, S.K., et al. 2012. High-affinity Dkk1 receptor Kremen1 is internalized by Clathrin-mediated endocytosis. *PLoS ONE* 7: e52190.
- Devadas, D., et al. 2014. Herpes simplex virus internalization into epithelial cells requires Na⁺/H⁺ exchangers and p21-activated kinases but neither clathrin- nor caveolin-mediated endocytosis. *J. Virol.* 88: 13378-13395.
- Umasankar, P.K., et al. 2015. A clathrin coat assembly role for the muniscin protein central linker revealed by TALEN-mediated gene editing. *Elife* 6: 28238-28256.
- McLelland, G.L., et al. 2016. Syntaxin-17 delivers PINK1/parkin-dependent mitochondrial vesicles to the endolysosomal system. *J. Cell Biol.* 214: 275-291.

RESEARCH USE

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

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