

APPL2 (B-12): sc-398860

BACKGROUND

The APPL family of proteins are involved in linking, trafficking and signaling downstream of tyrosine kinase receptors. APPL1, also designated adaptor protein containing pH domain, PTB domain and leucine zipper motif 1; APPL; or DCC interacting protein 13 α (DIP13 α), and APPL2, also designated adaptor protein containing pH domain, PTB domain and leucine zipper motif 2 or DCC interacting protein 13 β (DIP13 β), are involved in the coupling of epidermal growth factor (EGF) signaling and chromatin remodeling in the nucleus. They associate with GTPase Rab 5 and are released from the plasma membrane and translocated to the nucleus. In the nucleus, APPL1 and APPL2 associate with NuRD/MeCP1 and are essential for cell growth and proliferation. APPL2 also associates with follicle stimulating hormone receptor (FSHR). APPL2 is highly expressed in heart, brain, skeletal muscle, and kidney. APPL2 shares 54% homology with APPL1.

REFERENCES

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2. Habermann, B. 2004. The BAR-domain family of proteins: a case of bending and binding? *EMBO Rep.* 5: 250-255.
3. Miaczynska, M., et al. 2004. APPL proteins link Rab5 to nuclear signal transduction via an endosomal compartment. *Cell* 116: 445-456.
4. Mao, X., et al. 2006. APPL1 binds to adiponectin receptors and mediates adiponectin signalling and function. *Nat. Cell Biol.* 8: 516-523.
5. Lo, H. W., et al. 2006. Nuclear-cytoplasmic transport of EGFR involves receptor endocytosis, importin β 1 and CRM1. *J. Cell. Biochem.* 98: 1570-1583.
6. Lin, D.C., et al. 2006. APPL1 associates with TrkA and GIPC1 and is required for nerve growth factor-mediated signal transduction. *Mol. Cell. Biol.* 26: 8928-8941.
7. Varsano, T., et al. 2006. GIPC is recruited by APPL to peripheral TrkA endosomes and regulates TrkA trafficking and signaling. *Mol. Cell. Biol.* 26: 8942-8952.
8. Nechamen, C.A., et al. 2007. APPL1, APPL2, Akt2 and FOXO1a interact with FSHR in a potential signaling complex. *Mol. Cell. Endocrinol.* 260-262: 93-99.

CHROMOSOMAL LOCATION

Genetic locus: APPL2 (human) mapping to 12q23.3; Appl2 (mouse) mapping to 10 C1.

SOURCE

APPL2 (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 31-54 at the N-terminus of APPL2 of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

APPL2 (B-12) is recommended for detection of APPL2 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 APPL2 siRNA (h): sc-61982, APPL2 siRNA (m): sc-61983, APPL2 shRNA Plasmid (h): sc-61982-SH, APPL2 shRNA Plasmid (m): sc-61983-SH, APPL2 shRNA (h) Lentiviral Particles: sc-61982-V and APPL2 shRNA (m) Lentiviral Particles: sc-61983-V.

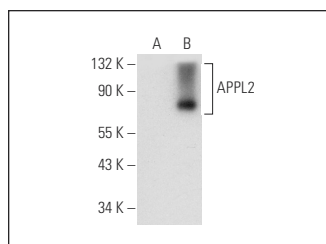
Molecular Weight of APPL2: 80 kDa.

Positive Controls: APPL2 (m): 293T Lysate: sc-118502 or Hs 181 Tes whole cell lysate: sc-364779.

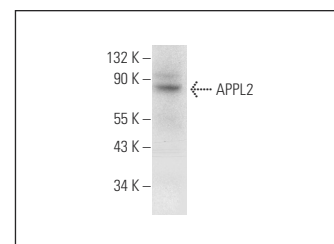
RECOMMENDED SUPPORT REAGENTS

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



APPL2 (B-12): sc-398860. Western blot analysis of APPL2 expression in non-transfected: sc-117752 (A) and mouse APPL2 transfected: sc-118502 (B) 293T whole cell lysates.



APPL2 (B-12): sc-398860. Western blot analysis of APPL2 expression in Hs 181 Tes whole cell lysate.

STORAGE

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