

APPL2 (m): 293T Lysate: sc-118502

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

1. Nechamen, C.A., et al. 2004. Human follicle-stimulating hormone (FSH) receptor interacts with the adaptor protein APPL1 in HEK 293 cells: potential involvement of the PI3K pathway in FSH signaling. *Biol. Reprod.* 71: 629-636.
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 (mouse) mapping to 10 C1.

PRODUCT

APPL2 (m): 293T Lysate represents a lysate of mouse APPL2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

APPL2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive APPL2 antibodies. Recommended use: 10-20 μ l per lane.

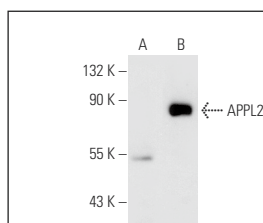
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

APPL2 (E-1): sc-271084 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse APPL2 expression in APPL2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

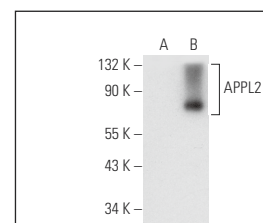
RECOMMENDED SUPPORT REAGENTS

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.

DATA



APPL2 (E-1): sc-271084. 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 non-transfected: sc-117752 (A) and mouse APPL2 transfected: sc-118502 (B) 293T whole cell lysates.

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.