

# APPL2 (F-2): sc-398859

## 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 $\alpha$  (DIP13 $\alpha$ ), and APPL2, also designated adaptor protein containing pH domain, PTB domain and leucine zipper motif 2 or DCC interacting protein 13 $\beta$  (DIP13 $\beta$ ), 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 HEK293 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 Rab 5 to nuclear signal transduction via an endosomal compartment. *Cell* 116: 445-456.

## CHROMOSOMAL LOCATION

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

## SOURCE

APPL2 (F-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 31-54 at the N-terminus of APPL2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPL2 (F-2) is available conjugated to agarose (sc-398859 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398859 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398859 PE), fluorescein (sc-398859 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398859 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398859 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398859 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398859 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398859 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398859 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398859 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

APPL2 (F-2) 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  $\mu$ g per 100-500  $\mu$ 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.

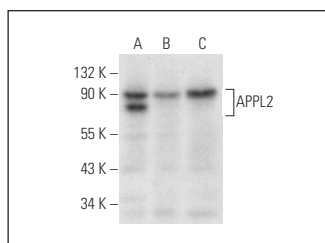
Molecular Weight of APPL2: 80 kDa.

Positive Controls: APPL2 (m): 293T Lysate: sc-118502, HeLa whole cell lysate: sc-2200 or Hs 181 Tes whole cell lysate: sc-364779.

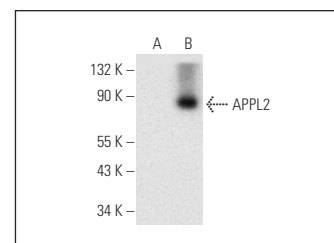
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



APPL2 (F-2): sc-398859. Western blot analysis of APPL2 expression in Hs 181 Tes (A), HeLa (B) and SK-N-MC (C) whole cell lysates.



APPL2 (F-2): sc-398859. Western blot analysis of APPL2 expression in non-transfected: sc-117752 (A) and mouse APPL2 transfected: sc-118502 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Diggins, N.L., et al. 2018.  $\alpha$ 5 $\beta$ 1 Integrin trafficking and Rac activation are regulated by APPL1 in a Rab 5-dependent manner to inhibit cell migration. *J. Cell Sci.* 131: jcs207019.

## STORAGE

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

## RESEARCH USE

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