



Polyclonal Antibody against APPL1

Catalog Number: 11130

Size: 100 µg

Host: Rabbit

Introduction to the Molecule

APPL1, an adaptor protein containing an NH2-terminal Bin/Amphiphysin/Rvs (BAR) domain, a central pleckstrin homology (PH) domain and a COOH-terminal phosphotyrosine binding (PTB) domain¹ was originally identified as an interacting partner of Akt in a yeast two-hybrid assay using Akt2 as a bait². APPL1 binds to a number of cell surface receptors (TrkA^{3,4}, DCC⁵, adiponectin^{6,7}, FSH⁸) and intracellular signaling molecules (small GTPase Rab5⁹, GIPC⁴ and inositol 5-phosphatase¹⁰), suggesting that APPL1 may act as a common relay to coordinate diverse signaling cascades. APPL1 potentiates insulin-mediated Akt activation by counteracting the effect of the Akt inhibitor TRB3¹¹.

Purification

Antigen affinity-purified

Immunogen

Recombinant full-length human APPL1 expressed in *E.coli*.

Specificity

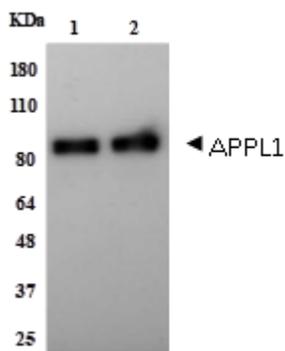
The antibody detects several types of APPL1 in different species such as human, monkey, mouse, rat etc. (about 85kDa).

Formulation & Storage

Liquid in phosphate-buffered saline (PBS). Store at -20°C for less than one week. For long-term storage, aliquot and freeze at -70°C. Avoid repeated freeze/thaw cycles.

Application/Usage

Western blot - This antibody can be used at 0.1-0.2 µg/mL with the appropriate secondary reagents to detect APPL1.



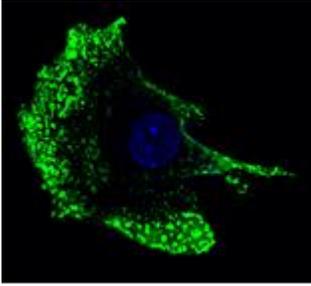
Western blot analysis of APPL1 in 20ug HEK293 (Lane 1) and C₂C₁₂

(Lane 2) cell lysate using anti-APPL1 followed by goat anti-rabbit antibody.

ELISA - This antibody can be used at 2.0-5.0 µg/mL with the appropriate secondary reagents to detect APPL1.

Immunoprecipitation - See reference [6], [11].

Immunostaining - This antibody can be used at 1.0-2.0 µg/mL with the appropriate secondary reagents to detect APPL1.



Immunostaining of APPL1 in C₂C₁₂ cells using anti-APPL1 followed by goat anti-rabbit antibody, visualized by confocal microscopy.

Quality Control Test

BCA to determine quantity of the antibody.

References

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- [7] Mao, X., et al., APPL1 binds to adiponectin receptors and mediates adiponectin signalling and function. *Nat Cell Biol.*, 2006. 8(5): p. 516-23. Epub 2006 Apr 16.
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- [9] Miaczynska, M., et al., APPL proteins link Rab5 to nuclear signal transduction via an endosomal compartment. *Cell.*, 2004. 116(3): p. 445-56.
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- [11] Cheng, K.K., et al., APPL1 potentiates insulin-mediated inhibition of hepatic glucose production and alleviates diabetes via Akt activation in mice. *Cell Metab*, 2009. 9(5): p. 417-27.