



## 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) domain<sup>1</sup> was originally identified as an interacting partner of Akt in a yeast two-hybrid assay using Akt2 as a bait<sup>2</sup>. APPL1 binds to a number of cell surface receptors (TrkA<sup>3,4</sup>, DCC<sup>5</sup>, adiponectin<sup>6,7</sup>, FSH<sup>8</sup>) and intracellular signaling molecules (small GTPase Rab5<sup>9</sup>, GIPC<sup>4</sup> and inositol 5-phosphatase<sup>10</sup>), 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 TRB3<sup>11</sup>.

### Purification

Antigen affinity-purified

### Immunogen

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

### Specificity

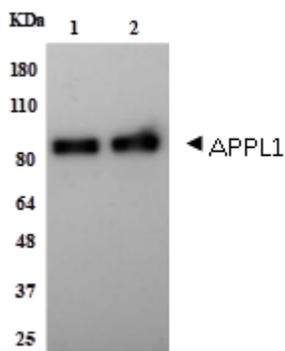
The antibody detects several types of APPL1 in different species such as human, monkey, mouse, rat etc. (about 85kDa).

### 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.



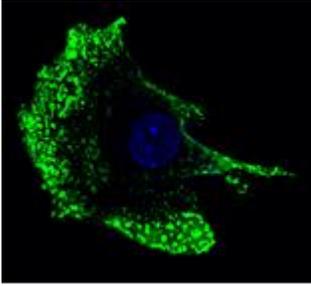
Western blot analysis of APPL1 in 20ug HEK293 (Lane 1) and C<sub>2</sub>C<sub>12</sub>

(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 C<sub>2</sub>C<sub>12</sub> 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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- [2] Mitsuuchi, Y., et al., Identification of a chromosome 3p14.3-21.1 gene, APPL, encoding an adaptor molecule that interacts with the oncoprotein-serine/threonine kinase AKT2. *Oncogene.*, 1999. 18(35): p. 4891-8.
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- [8] Nechamen, C.A., et al., 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.*, 2004. 71(2): p. 629-36. Epub 2004 Apr 7.
- [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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