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### Zuschläge

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- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# APPL1 (m): 293T Lysate: sc-118501

## 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. APPL1 is also involved in Akt regulation, binding the kinase domains of Akt1 and Akt2; neurotrophin receptor signaling via association with GIPC and Trk A; and it associates with follicle-stimulating hormone receptor (FSHR) and the catalytic subunit of type 1A PI 3-kinase. APPL1 is highly expressed in heart, ovary, skeletal muscle and pancreas. APPL1 shares 54% homology with APPL2.

## REFERENCES

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2. 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 PI 3-K pathway in FSH signaling. *Biol. Reprod.* 71: 629-636.
3. Du, K., et al. 2005. Regulation of the Akt kinase by interacting proteins. *Oncogene* 24: 7401-7409.
4. Mao, X., et al. 2006. APPL1 binds to adiponectin receptors and mediates adiponectin signalling and function. *Nat. Cell Biol.* 8: 516-523.
5. Nechamen, C.A., et al. 2006. APPL1, APPL2, Akt2 and FOXO1a interact with FSHR in a potential signaling complex. *Mol. Cell. Endocrinol.* 260-262: 93-99.
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. Zhu, G., et al. 2007. Structure of the APPL1 BAR-PH domain and characterization of its interaction with Rab5. *EMBO J.* 6: 3484-3493.
8. Li, J., et al. 2007. Crystal structures of the BAR-PH and PTB domains of human APPL1. *Structure* 15: 525-533.
9. Staiger, H., et al. 2007. Genetic variation within the APPL locus is not associated with metabolic or inflammatory traits in a healthy white population. *Diabet. Med.* 24: 817-822.

## CHROMOSOMAL LOCATION

Genetic locus: *Appl1* (mouse) mapping to 14 A3.

## PRODUCT

APPL1 (m): 293T Lysate represents a lysate of mouse APPL1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

APPL1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive APPL1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

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

## STORAGE

Store at -20 $^{\circ}$  C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.