

# GARNL1 (F-1): sc-376633



The Power to Question

## BACKGROUND

GARNL1 (GTPase activating Rap/Ran-GAP domain-like 1), also known as TULIP1 (Tuberin-like protein1) or GRIPE (GAP-related-interacting partner to E12), contains one Rap-GAP domain. It is expressed during embryogenesis with E12. During development, GARNL1 expression decreases, persisting at high levels only in neurons of the adult brain. GARNL1 localizes to the cytoplasm where it may play a role regulating GTP hydrolysis of proteins such as Ran and Rap. GARNL1 is imported to the nucleus via dimerization with E12. GARNL1 interacts with the HLH region of E12 and may function to negatively regulate the transcription of E12-dependent downstream target genes. This suggests that at least a portion of the function of GARNL1 is dependent upon its association with E12. GARNL1 may also associate with other HLH proteins and influence a variety of HLH signaling cascades. In adult brain, GARNL1 activity does not involve E12 and therefore it may serve a different function in developed neural tissue.

## REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
2. Heng, J.L., et al. 2002. Cloning and characterization of GRIPE, a novel interacting partner of the transcription factor E12 in developing mouse forebrain. J. Biol. Chem. 277: 43152-43159.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608884. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Schwarzbraun, T., et al. 2004. Cloning, genomic structure, and expression profiles of TULIP1 (GARNL1), a brain-expressed candidate gene for 14q13-linked neurological phenotypes, and its murine homologue. Genomics 84: 577-586.

## CHROMOSOMAL LOCATION

Genetic locus: RALGAP1 (human) mapping to 14q13.2.

## SOURCE

GARNL1 (F-1) is a mouse monoclonal antibody raised against amino acids 263-443 mapping near the N-terminus of GARNL1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GARNL1 (F-1) is available conjugated to agarose (sc-376633 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376633 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376633 PE), fluorescein (sc-376633 FITC), Alexa Fluor® 488 (sc-376633 AF488), Alexa Fluor® 546 (sc-376633 AF546), Alexa Fluor® 594 (sc-376633 AF594) or Alexa Fluor® 647 (sc-376633 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376633 AF680) or Alexa Fluor® 790 (sc-376633 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

GARNL1 (F-1) is recommended for detection of GARNL1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 GARNL1 siRNA (h): sc-92345, GARNL1 shRNA Plasmid (h): sc-92345-SH and GARNL1 shRNA (h) Lentiviral Particles: sc-92345-V.

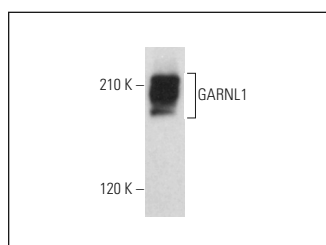
Molecular Weight of GARNL1: 230 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or WI-38 whole cell lysate: sc-364260.

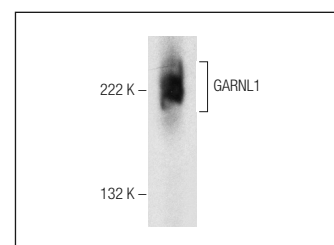
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



GARNL1 (F-1): sc-376633. Western blot analysis of GARNL1 expression in IMR-32 whole cell lysate.



GARNL1 (F-1): sc-376633. Western blot analysis of GARNL1 expression in IMR-32 whole cell lysate.

## 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.

## PROTOCOLS

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