SANTA CRUZ BIOTECHNOLOGY, INC.

# ARHGAP29 (D-3): sc-365554

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in down regulation of their active form. ARHGAP29 (Rho GTPase activating protein 29), also known as PARG1, is a 1,261 amino acid protein that is widely expressed and contains a phorbol-ester/DAG-type zinc finger and a Rho-GAP domain. There is high expression of ARHGAP29 in skeletal muscle and heart, intermediate expression in placenta, liver and pancreas, and weak expression in brain, lung and kidney. As a GTPase activator, ARHGAP29 converts Rho-type GTPases to an inactive GDP-bound state and has strong activity toward Rho A, and weaker activity toward Rac 1 and Cdc42. Also considered a specific effector of Rap 2A to regulate Rho, ARHGAP29 is strongly down-regulated in mantle-cell lymphomas and up-regulated in migrating glioma cells. ARHGAP29 exists as two alternatively spliced isoforms.

## REFERENCES


1. Saras, J., et al. 1997. A novel GTPase-activating protein for Rho interacts with a PDZ domain of the protein-tyrosine phosphatase PTPL1. J. Biol. Chem. 272: 24333-24338.
2. Bassères, D.S., et al. 2002. ARHGAP10, a novel human gene coding for a potentially cytoskeletal Rho-GTPase activating protein. Biochem. Biophys. Res. Commun. 294: 579-585.
3. Myagmar, B.E., et al. 2005. PARG1, a protein-tyrosine phosphatase-associated RhoGAP, as a putative Rap2 effector. Biochem. Biophys. Res. Commun. 329: 1046-1052.
4. Meyer-Ficca, M.L., et al. 2005. Poly(ADP-ribose) polymerases: managing genome stability. Int. J. Biochem. Cell Biol. 37: 920-926.


## CHROMOSOMAL LOCATION

Genetic locus: ARHGAP29 (human) mapping to 1p22.1.

## SOURCE

ARHGAP29 (D-3) is a mouse monoclonal antibody raised against amino acids 881-1180 mapping within an internal region of ARHGAP29 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARHGAP29 (D-3) is available conjugated to agarose (sc-365554 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365554 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365554 PE), fluorescein (sc-365554 FITC), Alexa Fluor® 488 (sc-365554 AF488), Alexa Fluor® 546 (sc-365554 AF546), Alexa Fluor® 594 (sc-365554 AF594) or Alexa Fluor® 647 (sc-365554 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365554 AF680) or Alexa Fluor® 790 (sc-365554 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

ARHGAP29 (D-3) is recommended for detection of ARHGAP29 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 ARHGAP29 siRNA (h): sc-78941, ARHGAP29 shRNA Plasmid (h): sc-78941-SH and ARHGAP29 shRNA (h) Lentiviral Particles: sc-78941-V.

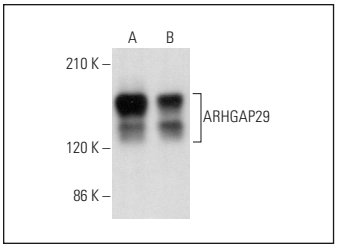
Molecular Weight of ARHGAP29: 142 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or HUV-EC-C whole cell lysate: sc-364180.

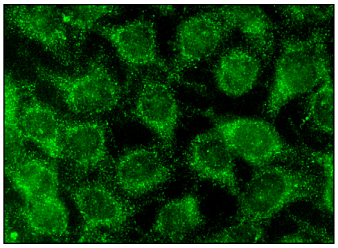
## RECOMMENDED SUPPORT REAGENTS

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




ARHGAP29 (D-3): sc-365554. Western blot analysis of ARHGAP29 expression in A-431 (**A**) and HUV-EC-C (**B**) whole cell lysates.



ARHGAP29 (D-3): sc-365554. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Tagashira, T., et al. 2018. Afadin facilitates vascular endothelial growth factor-induced network formation and migration of vascular endothelial cells by inactivating Rho-associated kinase through ARHGAP29. Arterioscler. Thromb. Vasc. Biol. 38: 1159-1169.
2. Randles, M.J., et al. 2020. Basement membrane ligands initiate distinct signalling networks to direct cell shape. Matrix Biol. 90: 61-78.


## RESEARCH USE

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