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# RHOG Antibody

Catalog # ASC11858

## Product Information

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| **Application** | WB, E, IHC-P |
| **Primary Accession** | P84095 |
| **Other Accession** | NP_001656, 46249393 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Calculated MW** | 21309 |
| **Concentration (mg/ml)** | 1 mg/mL |
| **Conjugate** | Unconjugated |
| **Application Notes** | RHOG antibody can be used for detection of RHOG by Western blot at 1 - 2 g/ml. Antibody can also be used for immunohistochemistry starting at 5 g/mL. |

## Additional Information

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| **Gene ID** | 391 |
| **Other Names** | Rho-related GTP-binding protein RhoG, RHOG, ARHG |
| **Target/Specificity** | RHOG; RHOG antibody is human, mouse and rat reactive. |
| **Reconstitution & Storage** | RHOG antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. |
| **Precautions** | RHOG Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | RHOG |
| **Synonyms** | ARHG |
| **Function** | Plays a role in immunological synaptic F-actin density and architecture organization (PubMed:33513601). Regulates actin reorganization in lymphocytes, possibly through the modulation of Rac1 activity (PubMed:33513601). Required for the formation of membrane ruffles during macropinocytosis (PubMed:15133129). Plays a role in cell migration and is required for the formation of cup-like structures during trans-endothelial migration of leukocytes (PubMed:17875742). Binds phospholipids in an activation-dependent manner; thereby acting as an anchor for other proteins to the plasma membrane (PM) (PubMed:33513601). Plays a role in exocytosis of cytotoxic granules (CG) by lymphocytes/Component of the exocytosis |

machinery in natural killer (NK) and CD8+ T cells (PubMed:33513601). Promotes the docking of cytotoxic granules (CG) to the plasma membrane through the interaction with UNC13D (PubMed:33513601). Involved in the cytotoxic activity of lymphocytes/primary CD8+ T cells (PubMed:33513601).

**Cellular Location** Cell membrane; Lipid-anchor; Cytoplasmic side

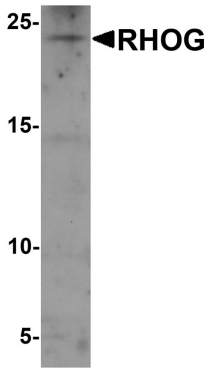
## Background

The ras homolog family member G (RHOG), also known as rho-related GTP-binding protein, is a member of the Rho family of small GTPases, which cycle between inactive GDP-bound and active GTP-bound states and function as molecular switches in signal transduction cascades (1). RHOG controls a pathway that requires the microtubule network and activates Rac1 and Cdc42Hs independently of their growth factor signaling pathway (2). RHOG is also involved in the transcriptional regulation of interferon-gamma and nuclear factor of activated T cells (NFAT) and the regulation of the actin skeleton in lymphocytes (3).

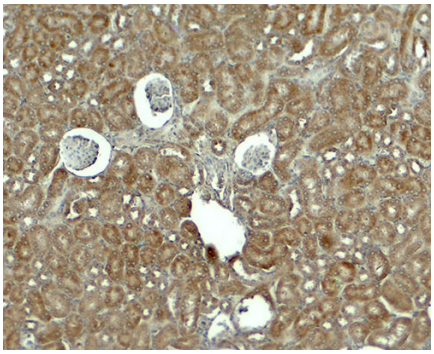
## References

Vincent S, Janteur P, and Fort P. Growth-regulated of rhoG, a new member of the ras homolog family. Mol. Cell Biol. 1992; 12:3138-48.
Gauthier-Rouviere C, Vignal E, Meriane M, et al. RhoG GTPase controls a pathway that independently activates Rac1 and Cdc42Hs. Mol. Biol. Cell 1998; 9:1379-94.
Vigorito E, Billadeu DD, Savoy D, et al. RhoG regulates gene expression and the actin skeleton in lymphocytes. Oncogene 2003; 22:330-42.

## Images




Western blot analysis of RHOG in human kidney tissue lysate with RHOG antibody at 1 µg/ml.



Immunohistochemistry of RHOG in mouse kidney tissue with RHOG antibody at 5 µg/ml.