SANTA CRUZ BIOTECHNOLOGY, INC.

# Rho A (C-15): sc-32039

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*The Power to Question*

## BACKGROUND

The Ras p21 family of guanine nucleotide proteins has been widely studied in view of its apparent role in signal transduction pathways and high frequency of mutations in human malignancies. It is now clear, however, that the Ras proteins (H-, K- and N-Ras p21) are members of a much larger superfamily of related proteins. Six members of this family, Rap 1 (A and B), Rap 2, R-Ras and Ral (A and B), exhibit approximately 50% amino acid homology to Ras. The three mammalian Rho proteins (A, B and C) are approximately 30% homologous to Ras and are expressed in a wide range of cell types. Both Ras p21 and Rho p21, as well as other members of the Ras superfamily, contain a carboxy terminal CAAX sequence (C, cysteine; A, aliphatic amino acid; X, any amino acid) which in the case of Ras has been shown to be essential for correct localization and function.

## REFERENCES


1. Madaule, P., et al. 1985. A novel Ras-related gene family. Cell 41: 31-40.
2. Yeramian, P., et al. 1987. Nucelotide sequence of human Rho cDNA clone 12. Nucleic Acids Res. 15: 1869.
3. Barbacid, M. 1987. Ras genes. Annu. Rev. Biochem. 56: 779-827.


## CHROMOSOMAL LOCATION

Genetic locus: RHOA (human) mapping to 3p21.31; Rhoa (mouse) mapping to 9 F2.

## SOURCE

Rho A (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Rho A of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32039 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rho A (C-15) is recommended for detection of Rho A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with Rho B and Rho C.

Rho A (C-15) is also recommended for detection of Rho A in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rho A siRNA (h): sc-29471, Rho A siRNA (m): sc-36414, Rho A shRNA Plasmid (h): sc-29471-SH, Rho A shRNA Plasmid (m): sc-36414-SH, Rho A shRNA (h) Lentiviral Particles: sc-29471-V and Rho A shRNA (m) Lentiviral Particles: sc-36414.

Molecular Weight of Rho A: 24 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, PC-12 cell lysate: sc-2250 or HL-60 whole cell lysate: sc-2209.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS


1. Karteris, E., et al. 2004. Urocortin II is expressed in human pregnant myometrial cells and regulates myosin light chain phosphorylation: potential role of the type-2 corticotropin-releasing hormone receptor in the control of myometrial contractility. Endocrinology 145: 890-900.
2. Su, R., et al. 2010. Grp78 promotes the invasion of hepatocellular carcinoma. BMC Cancer 10: 20.
3. Wang, H., et al. 2010. Silencing of RhoA and RhoC expression by RNA interference suppresses human colorectal carcinoma growth *in vivo*. J. Exp. Clin. Cancer Res. 29: 123.
4. Chiou, W.F., et al. 2010. Abnormal protein expression in the corpus cavernosum impairs erectile function in type 2 diabetes. BJU Int. 105: 674-680.
5. Palozza, P., et al. 2011. Lycopene regulation of cholesterol synthesis and efflux in human macrophages. J. Nutr. Biochem. 22: 971-978.
6. Bakshi, K., et al. 2011. Prenatal cocaine exposure increases synaptic localization of a neuronal RasGEF, GRASP-1 via hyperphosphorylation of AMPAR anchoring protein, GRIP. PLoS ONE 6: e25019.


## 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 or our catalog for detailed protocols and support products.