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Rho-GTPase Antibody Sampler Kit


Cell Signaling
TECHNOLOGY®

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1 Kit (6 x 20 microliters)

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Cdc42 (11A11) Rabbit mAb	2466	20 µl	21 kDa	Rabbit
Phospho-Rac1/cdc42 (Ser71) Antibody	2461	20 µl	28 kDa	Rabbit
RhoA (67B9) Rabbit mAb	2117	20 µl	21 kDa	Rabbit IgG
RhoB Antibody	2098	20 µl	21 kDa	Rabbit
RhoC (D40E4) Rabbit mAb	3430	20 µl	21 kDa	Rabbit IgG
Rac1/2/3 Antibody	2465	20 µl	21 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Rho-GTPase Antibody Sampler Kit contains reagents to examine aspects of cell migration, adhesion, proliferation and differentiation in cells. This kit includes enough primary and secondary antibodies to perform two Western blot experiments per each primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

The Rho family of small GTPases, including Rho, Rac, and cdc42, act as molecular switches to regulate processes such as cell migration, adhesion, proliferation and differentiation (1). RhoA, RhoB and RhoC are all highly homologous but appear to have divergent biological functions. The best characterized of these proteins, RhoA, regulates actomyosin contractility, cytokinesis, focal adhesion assembly and cell polarity (2-5). Mammalian Rac exists as three isoforms (Rac1, Rac2 and Rac3) that show high sequence similarity. Well-characterized Rac1 and cdc42 are ubiquitously expressed and play key signaling roles in cytoskeletal reorganization, membrane trafficking, transcriptional regulation, and cell growth and development (6). Phosphorylation of Rac1 at a putative Akt site (Ser71) may limit Rac1 activity through inhibition of GTP binding (7). Rac2 is expressed in cells of hematopoietic origin, while Rac3 is highly expressed in brain and in many other tissues. The Vav family of guanine-nucleotide exchange factors mediates activation of Rho/Rac family small GTPases (8). Negative regulation of Rho-activity members of the p190 RhoGAP family (p190-A and p190-B) may be controlled by Src phosphorylation of Tyr residues, activating the p190 GAP domain (8-10). Furthermore, Rho GDP dissociation inhibitor (RhoGDI) associates with Rho/Rac to negatively regulate nucleotide exchange membrane localization (11).

Background References

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