Anti-RAC1 Antibody [PSH05-09] - BSA and Azide free

HA750982

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Rat
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 21 kDa
Clone number:	PSH05-09

Description: Rac1, also known as Ras-related C3 botulinum toxin substrate 1, is a protein found in human cells. It is encoded by the RAC1 gene. This gene can produce a variety of alternatively spliced versions of the Rac1 protein, which appear to carry out different functions. Rac1 is a small (~21 kDa) signalling G protein (more specifically a GTPase), and is a member of the Rac subfamily of the family Rho family of GTPases. Members of this superfamily appear to regulate a diverse array of cellular events, including the control of GLUT4 translocation to glucose uptake, cell growth, cytoskeletal reorganization, antimicrobial cytotoxicity, and the activation of protein kinases. Rac1 is a pleiotropic regulator of many cellular processes, including the cell cycle, cell-cell adhesion, motility (through the actin network), and of epithelial differentiation (proposed to be necessary for maintaining epidermal stem cells).

Immunogen: Recombinant protein within human RAC1 aa 1-192 / 192.

Positive control: HEK-293 cell lysate, Huh7 cell lysate, HUVEC cell lysate, HL-60 cell lysate, HeLa cell lysate, PC-12 cell lysate, HL-60.

Subcellular location: Cell membrane, Cell projection, Cytoplasm, Membrane, Nucleus, Synapse.

Database links: SwissProt: P63000 Human | Q6RUV5 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:100

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

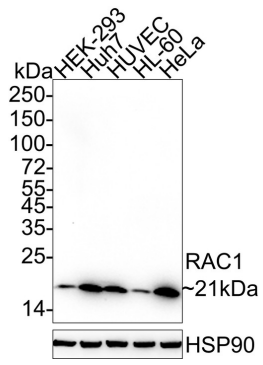

Fig1: Western blot analysis of RAC1 on different lysates with Rabbit anti-RAC1 antibody (HA750982) at 1/2,000 dilution.

Lane 1: HEK-293 cell lysate
Lane 2: Huh7 cell lysate
Lane 3: HUVEC cell lysate
Lane 4: HL-60 cell lysate
Lane 5: HeLa cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 21 kDa
Observed band size: 21 kDa

Exposure time: 2 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750982) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

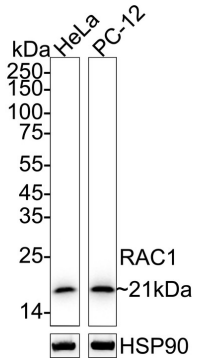

Fig2: Western blot analysis of RAC1 on different lysates with Rabbit anti-RAC1 antibody (HA750982) at 1/2,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: PC-12 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 21 kDa
Observed band size: 21 kDa

Exposure time: 20 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750982) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

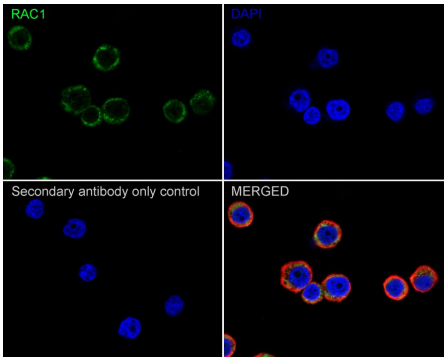

Fig3: Immunocytochemistry analysis of HL-60 cells labeling RAC1 with Rabbit anti-RAC1 antibody (HA750982) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-RAC1 antibody (HA750982) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Background References

1. Liu J et al. Metabolic enzyme LDHA activates Rac1 GTPase as a noncanonical mechanism to promote cancer. Nat Metab. 2022 Dec
2. Liang J et al. Rac1, A Potential Target for Tumor Therapy. Front Oncol. 2021 May