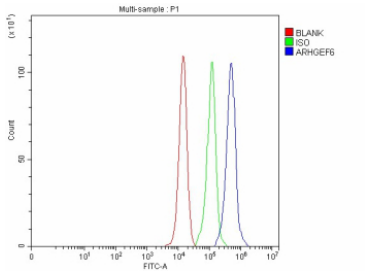
ARHGEF6 Antibody / Rho guanine nucleotide exchange factor 6 (FY13172)

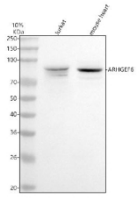
Catalog No.	Formulation	Size
FY13172	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q15052
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This ARHGEF6 antibody is available for research use only.



Flow Cytometry analysis of PC-3 cells using anti-ARHGEF6 antibody. Overlay histogram showing PC-3 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-ARHGEF6 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of ARHGEF6 using anti-ARHGEF6 antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: mouse heart tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ARHGEF6 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. Western blot analysis of ARHGEF6 in human and mouse lysates shows the expected ~87 kDa band appearing as a doublet, consistent with reported phosphorylated and unmodified forms of ARHGEF6.

Description

ARHGEF6 antibody detects Rho guanine nucleotide exchange factor 6, a signaling protein that activates Rho family GTPases to control cytoskeletal organization, cell migration, and synaptic plasticity. The UniProt recommended name is Rho guanine nucleotide exchange factor 6 (ARHGEF6). This protein, also known as alpha-PIX or Cool-2, acts as an exchange factor for RAC1 and CDC42, converting them from GDP-bound inactive forms to GTP-bound active states.

Functionally, ARHGEF6 antibody identifies a 776-amino-acid scaffold protein containing SH3, DH, and PH domains that mediate interaction with PAK kinases and other signaling adaptors. ARHGEF6 promotes actin cytoskeleton rearrangements, lamellipodia formation, and cell adhesion dynamics through activation of Rho GTPase signaling cascades.

The ARHGEF6 gene is located on chromosome Xq26.3 and is highly expressed in the brain, immune cells, and epithelial tissues. It participates in synaptic development, immune cell migration, and epithelial junction organization by coupling surface receptors to cytoskeletal effectors.

Pathologically, mutations in ARHGEF6 cause X-linked intellectual disability due to impaired synaptic signaling and dendritic spine morphology. Aberrant ARHGEF6 expression is also associated with immune dysfunction and metastatic cancer cell migration. Research using ARHGEF6 antibody supports studies in cell signaling, cytoskeletal regulation, and neurological disorders.

ARHGEF6 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect guanine nucleotide exchange factors. NSJ Bioreagents provides ARHGEF6 antibody reagents optimized for studies in signal transduction, neuronal connectivity, and cytoskeletal remodeling.

Structurally, Rho guanine nucleotide exchange factor 6 forms multiprotein complexes with PAK kinases and GIT proteins, linking receptor activation to localized actin assembly. This antibody enables exploration of ARHGEF6's molecular function in Rho GTPase activation and cellular morphogenesis.

Application Notes

Optimal dilution of the ARHGEF6 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ARHGEF6 recombinant protein (Position: E54-R765) was used as the immunogen for the ARHGEF6 antibody.

Storage

After reconstitution, the ARHGEF6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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