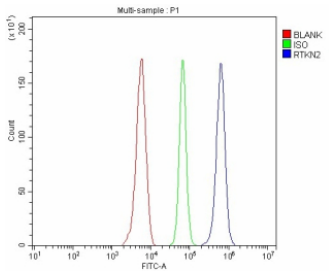
RTKN2 Antibody / Rhotekin 2 (FY13233)

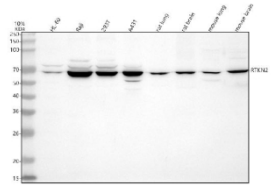
Catalog No.	Formulation	Size
FY13233	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
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	Q8IZC4
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Western Blot : 0.25-0.5ug/ml
Limitations	This RTKN2 antibody is available for research use only.



Flow Cytometry analysis of Raji cells using anti-RTKN2 antibody. Overlay histogram showing Raji cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-RTKN2 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 RTKN2 using anti-RTKN2 antibody. Lane 1: human HL-60 whole cell lysates, Lane 2: human Raji whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human whole cell lysates, Lane 5: rat lung tissue lysates, Lane 6: rat brain tissue lysates, Lane 7: mouse lung tissue lysates, Lane 8: mouse brain 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-RTKN2 antibody at 0.25 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. A specific band was detected for RTKN2 at approximately 69 kDa. The expected molecular weight of RTKN2 is ~69 kDa.

Description

RTKN2 antibody detects Rhotekin 2, a Rho GTPase effector protein that regulates cytoskeletal dynamics, apoptosis, and immune cell signaling. The UniProt recommended name is Rhotekin 2 (RTKN2). This protein acts as a scaffold for RhoA-mediated signaling pathways that control actin organization, transcriptional activity, and cell survival.

Functionally, RTKN2 antibody identifies a 646-amino-acid cytoplasmic protein containing a Rho-binding domain (RBD) and ankyrin repeats that mediate protein-protein interactions. RTKN2 binds active GTP-bound RhoA to stabilize cytoskeletal structures and prevent apoptotic signaling. It also influences NF-kappaB activation and transcriptional regulation of immune and inflammatory genes. In T lymphocytes, RTKN2 promotes cell survival and proliferation by integrating RhoA and anti-apoptotic signaling pathways.

The RTKN2 gene is located on chromosome 10q21.1 and is highly expressed in lymphoid tissues, testis, and brain. Expression increases during T-cell activation and stress responses, indicating roles in immune signaling and cytoskeletal adaptation. RTKN2 contributes to both structural stability and signaling plasticity within dynamic cellular environments.

Pathologically, RTKN2 has been implicated in cancer and autoimmune disease. Overexpression enhances survival and proliferation of cancer cells through activation of NF-kappaB and suppression of apoptosis, whereas reduced RTKN2 expression may impair lymphocyte function and stress resistance. Research using RTKN2 antibody supports studies in Rho GTPase signaling, cytoskeletal dynamics, and immune cell regulation.

RTKN2 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect Rho effector proteins. NSJ Bioreagents provides RTKN2 antibody reagents optimized for research in signal transduction, apoptosis regulation, and cytoskeletal remodeling.

Structurally, Rhotekin 2 consists of a central RhoA-binding domain, ankyrin repeats, and multiple phosphorylation sites that control its localization and interaction with downstream effectors. Its structure enables binding to GTP-bound RhoA and integration with cell survival pathways. This antibody facilitates analysis of RTKN2's role in Rho-dependent signaling and immune cell function.

Application Notes

Optimal dilution of the RTKN2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RTKN2 recombinant protein (Position: M1-D572) was used as the immunogen for the RTKN2 antibody.

Storage

After reconstitution, the RTKN2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.