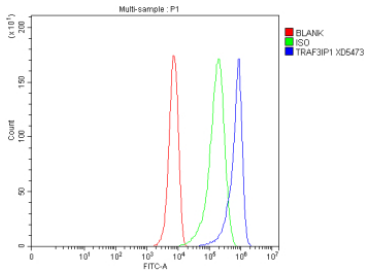
TRAF3IP1 Antibody / TRAF3-interacting protein 1 (FY12178)

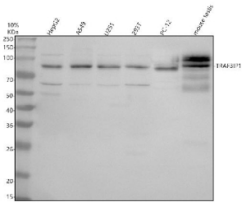
Catalog No.	Formulation	Size
FY12178	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
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	Q8TDR0
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This TRAF3IP1 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-TRAF3IP1 antibody. Overlay histogram showing HepG2 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-TRAF3IP1 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 TRAF3IP1 using anti-TRAF3IP1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HepG2 whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human 293T whole cell lysates, Lane 5: rat PC-12 whole cell lysates, Lane 6: mouse testis 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-TRAF3IP1 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 an ECL Plus Western Blotting Substrate. The expected band size for TRAF3IP1 is at 79 kDa.

Description

TRAF3IP1 antibody detects TRAF3-interacting protein 1, encoded by the TRAF3IP1 gene on chromosome 2q37.3. TRAF3IP1 antibody is widely used in research on ciliogenesis, vesicle transport, and signaling pathways. TRAF3IP1, also known as IFT54, is a component of the intraflagellar transport (IFT) complex B, which mediates bidirectional transport of cargo along axonemal microtubules during cilia formation and maintenance. Its role in ciliogenesis links it to developmental processes, sensory perception, and signaling networks such as Hedgehog signaling. Expression is highest in ciliated tissues, including kidney, retina, and brain.

Structurally, TRAF3IP1 contains coiled-coil domains that mediate assembly with other IFT complex B proteins. It interacts with both microtubules and vesicular cargo, bridging the cytoskeleton with trafficking machinery. The N-terminal domain mediates binding to TRAF3, while the C-terminal region associates with kinesin motors and IFT components. This modular architecture supports its dual functions in signaling and transport.

Functionally, TRAF3IP1 plays central roles in ciliogenesis and ciliary signaling. By forming part of the IFT-B complex, it ensures delivery of structural proteins and signaling receptors to the growing cilium. Knockdown or mutation disrupts cilia formation, impairing sensory functions and developmental signaling. TRAF3IP1 also participates in TRAF3-mediated immune signaling, though this role is less characterized. Researchers use TRAF3IP1 antibody to study ciliary transport, Hedgehog signaling, and cilia-related disorders.

Clinically, mutations in TRAF3IP1 cause nephronophthisis, a ciliopathy characterized by kidney failure, retinal degeneration, and skeletal abnormalities. Additional associations include Joubert syndrome and other developmental ciliopathies. Dysregulation of TRAF3IP1 has also been observed in cancer, particularly renal carcinomas, where defective ciliogenesis contributes to tumorigenesis. NSJ Bioreagents supplies TRAF3IP1 antibody as a reliable reagent for ciliopathy research, developmental biology, and cancer studies.

Experimentally, TRAF3IP1 antibody is used in western blotting to detect the ~64 kDa protein, in immunofluorescence microscopy to study localization at basal bodies and cilia, and in immunohistochemistry to analyze expression in ciliated tissues. Immunoprecipitation with TRAF3IP1 antibody allows isolation of IFT complexes for biochemical characterization.

Application Notes

Optimal dilution of the TRAF3IP1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TRAF3IP1 recombinant protein (Position: L52-R691) was used as the immunogen for the TRAF3IP1 antibody.

Storage

After reconstitution, the TRAF3IP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.