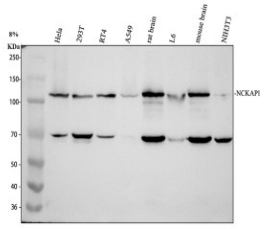
NCKAP1 Antibody / NAP1 Polyclonal Antibody (R32804)

Catalog No.	Formulation	Size
R32804	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9Y2A7
Applications	WB: 0.5-1ug/ml
Limitations	This NCKAP1 Antibody / NAP1 Polyclonal Antibody is available for research use only.



NCKAP1 Antibody by WB in human, rat and mouse samples. Western blot analysis using NCKAP1 Antibody at 0.5 ug/ml. Lanes 1-4: human HeLa, 293T, RT4 and A549 cell lysates; lanes 5-6: rat brain and L6 cell lysates; lanes 7-8: mouse brain and NIH3T3 cell lysates. Samples were separated by 8% SDS-PAGE under reducing conditions, with 30 ug of protein loaded per lane. Immunoreactive bands are detected at approximately 115-125 kDa, consistent with the expected molecular weight of NCKAP1. This NAP1 Polyclonal Antibody recognizes a component of the WAVE regulatory complex involved in actin cytoskeleton remodeling.

Description

NCKAP1 Antibody recognizes NCK-associated protein 1, a cytoplasmic protein encoded by the NCKAP1 gene. Also known as NAP1 and HEM2, NCKAP1 is an essential component of the WAVE regulatory complex (WRC), a multiprotein assembly that regulates actin filament formation and cytoskeletal remodeling. The WAVE complex connects signals from small GTPases to the actin-related protein 2/3 (Arp2/3) complex, promoting branched actin polymerization. Through this mechanism, NCKAP1 contributes to cell migration, membrane protrusion, cell adhesion, and the establishment of cellular polarity.

The human NCKAP1 gene is located on chromosome 2q32.1 and encodes a large protein of approximately 1128 amino

acids with a predicted molecular weight near 129 kDa. NCKAP1 functions as a structural component of the WAVE regulatory complex alongside proteins including CYFIP1 or CYFIP2, WASF family members, ABI proteins, and BRK1. These components form a stable assembly that coordinates the activation of actin nucleation machinery. NCKAP1 helps maintain complex integrity and supports the regulated transmission of signals controlling actin dynamics.

RAC1, a member of the Rho family of small GTPases, is an important upstream regulator of WAVE complex activity. Activated RAC1 promotes signaling events that stimulate Arp2/3-dependent actin assembly, generating the branched filament networks required for lamellipodia formation. These sheet-like membrane protrusions are essential for directional cell movement and responses to extracellular cues. The NAP1 Polyclonal Antibody is relevant to research investigating RAC1 signaling, actin cytoskeleton organization, and the molecular mechanisms governing cellular motility.

NCKAP1 has important functions in nervous system development, where dynamic actin remodeling supports neuronal migration, neurite extension, and the formation of functional neural circuits. The WAVE regulatory complex contributes to growth cone behavior, dendritic organization, and synaptic development. Disruption of NCKAP1 function can interfere with these processes and has been associated with abnormalities in neuronal development. Research into NCKAP1 and related WAVE complex proteins provides insight into how cytoskeletal regulation influences brain development and neuronal connectivity.

Beyond the nervous system, NCKAP1 participates in processes requiring coordinated cell movement and morphological changes, including tissue remodeling, immune cell migration, and cancer cell invasion. Altered WAVE complex activity can influence cellular responses to environmental signals and affect the organization of actin-rich membrane structures. NSJ Bioreagents offers antibodies targeting NCKAP1 for research into cytoskeletal regulation and intracellular signaling. An NCKAP1 Antibody provides a tool for investigating NAP1 expression and its involvement in actin polymerization, cell migration, neuronal development, and WAVE regulatory complex function.

Explore our Signal Transduction Antibodies collection for additional antibodies targeting proteins involved in RAC1 signaling, cytoskeletal remodeling, and cellular migration.

Application Notes

Optimal dilution of the NCKAP1 Antibody / NAP1 Polyclonal Antibody should be determined by the researcher.

Immunogen

Amino acids S2-K201 from the human protein were used as the immunogen for the NCKAP1 antibody.

Storage

After reconstitution, the NCKAP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

NAP1 antibody, NCK Associated Protein 1 antibody, HEM2 antibody, NCKAP1 Protein antibody, NCK Associated Protein 1-Like antibody

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