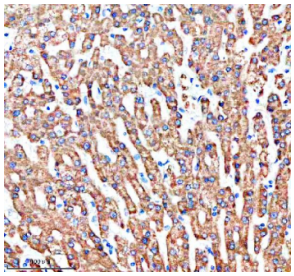
SHARPIN Antibody / SHANK-associated RH domain-interacting protein (FY12962)

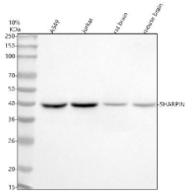
Catalog No.	Formulation	Size
FY12962	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

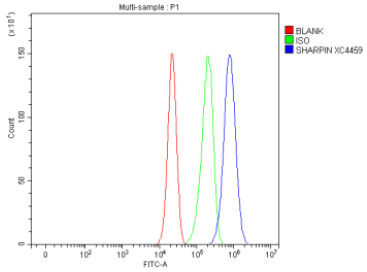
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9H0F6
Localization	Cytoplasm
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SHARPIN antibody is available for research use only.



Immunohistochemical staining of SHARPIN using anti-SHARPIN antibody. SHARPIN was detected in a paraffin-embedded section of human liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SHARPIN antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of SHARPIN using anti-SHARPIN antibody. Lane 1: human whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: rat brain tissue lysates, Lane 4: 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-SHARPIN 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. A specific band was detected for SHARPIN at approximately 40 kDa. The expected molecular weight of SHARPIN is ~40 kDa.



Flow Cytometry analysis of cells using anti-SHARPIN antibody. Overlay histogram showing 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-SHARPIN 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.

Description

SHARPIN antibody detects SHANK-associated RH domain-interacting protein, a multifunctional adaptor protein involved in inflammation, apoptosis, and cytoskeletal signaling. The UniProt recommended name is SHANK-associated RH domain-interacting protein (SHARPIN). This cytoplasmic protein is a key component of the linear ubiquitin chain assembly complex (LUBAC), which modulates NF-kappaB activation and immune response signaling.

Functionally, SHARPIN antibody recognizes a 387-amino-acid protein that acts as a scaffolding subunit linking the ubiquitin ligase HOIP (RNF31) and HOIL-1L (RBCK1) to form the active LUBAC complex. This complex catalyzes linear (M1-linked) polyubiquitination of signaling proteins, stabilizing TNF receptor-associated complexes and promoting NF-kappaB activation. Through this pathway, SHARPIN regulates innate and adaptive immune responses, cell survival, and inflammatory gene transcription. It also negatively regulates apoptotic signaling by inhibiting caspase activation downstream of TNF receptors.

The SHARPIN gene is located on chromosome 8q24.3 and encodes a widely expressed cytoplasmic protein enriched in immune cells, skin, and neural tissues. Beyond immune regulation, SHARPIN interacts with integrins and actin-associated proteins to control cell adhesion and motility. It binds to the SHANK family of postsynaptic scaffolds, linking cytoskeletal dynamics to synaptic stability and plasticity. SHARPIN thus functions as both an immune modulator and structural adaptor in distinct cellular contexts.

Deficiency or mutation of SHARPIN disrupts LUBAC assembly, leading to impaired NF-kappaB signaling and increased apoptosis. Mouse models lacking SHARPIN exhibit severe chronic inflammation and skin lesions, known as the chronic proliferative dermatitis (cpdm) phenotype. In humans, SHARPIN dysregulation has been implicated in inflammatory diseases, cancer, and neurodegeneration. Elevated SHARPIN expression correlates with tumor progression in prostate and breast cancers, where it enhances PI3K/AKT signaling and resistance to apoptosis.

SHARPIN antibody is widely used for research into inflammatory signaling, ubiquitination, and immune regulation. Applications include immunoblotting, immunohistochemistry, and co-immunoprecipitation to analyze LUBAC complex formation and function. Its detection provides insight into TNF receptor signaling, cell death control, and integrin-mediated adhesion. In neurobiology, SHARPIN interacts with SHANK scaffolds and PSD-95 at excitatory synapses, influencing postsynaptic organization and neuronal communication.

Structurally, SHARPIN contains an N-terminal PH domain-like motif, a central ubiquitin-like (UBL) domain, and a C-terminal Npl4 zinc finger (NZF) domain responsible for binding linear ubiquitin chains. Post-translational regulation includes phosphorylation and ubiquitination, controlling its participation in signaling networks. NSJ Bioreagents provides SHARPIN antibody reagents validated for use in inflammation, ubiquitin signaling, and neurobiology research.

Application Notes

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

Immunogen

E.coli-derived human SHARPIN recombinant protein (Position: H25-R325) was used as the immunogen for the SHARPIN antibody.

Storage

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