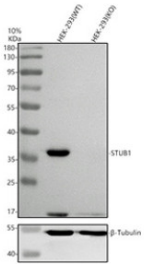
STUB1 Antibody / CHIP Polyclonal Antibody (RQ4234)

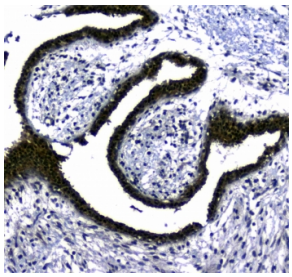
Catalog No.	Formulation	Size
RQ4234	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

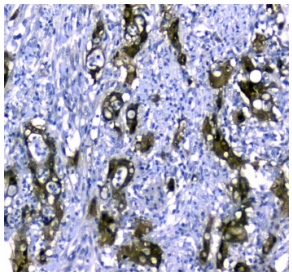
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q9UNE7
Localization	Cytoplasmic, nuclear
Applications	Western Blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Direct ELISA: 0.1-0.5ug/ml Immunofluorescence (FFPE): 2-4ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This STUB1 Antibody / CHIP Polyclonal Antibody is available for research use only.



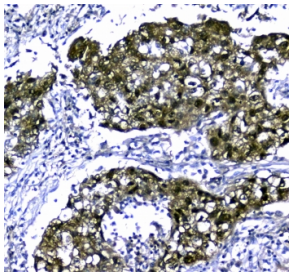
STUB1 Antibody WB Analysis of Wild-Type and STUB1 Knockout HEK293 Cells. Western blot analysis of human HEK293 wild-type (WT, lane 1) and STUB1 knockout (KO, lane 2) whole-cell lysates using CHIP Polyclonal Antibody at 0.5 ug/ml. A prominent immunoreactive band near 35 kDa is detected in WT lysate and is absent from the KO sample, supporting STUB1-specific recognition. Beta-Tubulin serves as the loading control. The observed band corresponds to the predicted molecular weight of approximately 35 kDa.



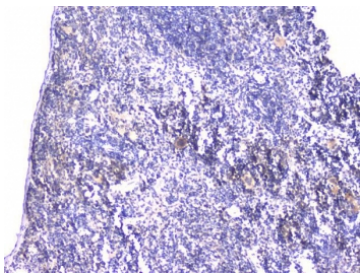
STUB1 Antibody IHC Staining of Human Breast Cancer Tissue. Immunohistochemical analysis of FFPE human breast cancer tissue using CHIP Polyclonal Antibody at 1 ug/ml. Prominent brown immunoreactivity is observed in the epithelial component, with staining concentrated around glandular structures and comparatively limited staining in surrounding stromal regions. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 minutes, followed by cooling before antibody incubation.



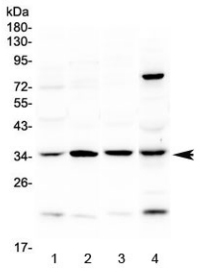
STUB1 Antibody IHC Staining of Human Colon Cancer Tissue. Immunohistochemical analysis of FFPE human colon cancer tissue using CHIP Polyclonal Antibody at 1 ug/ml. Brown staining is observed in malignant glandular epithelial structures, with heterogeneous distribution across the tissue section. Surrounding stromal regions exhibit comparatively limited immunoreactivity. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 minutes, followed by cooling before antibody incubation.



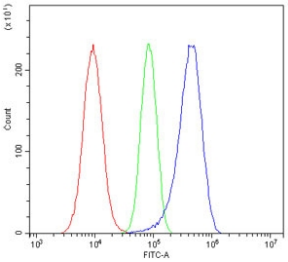
STUB1 Antibody IHC Staining of Human Lung Cancer Tissue. Immunohistochemical analysis of FFPE human lung cancer tissue using CHIP Polyclonal Antibody at 1 ug/ml. Brown immunoreactivity is visible in tumor-associated epithelial structures, with staining distributed through the cytoplasm and variation among individual cells. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 minutes, followed by cooling before antibody incubation.



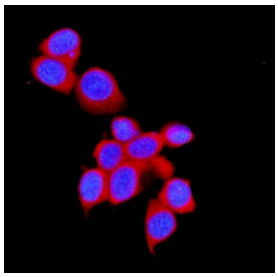
STUB1 Antibody IHC Staining of Mouse Spleen Tissue. Immunohistochemical analysis of FFPE mouse spleen tissue using CHIP Polyclonal Antibody at 1 ug/ml. Brown immunoreactivity is distributed among cells within the splenic parenchyma, with regional variation in staining. The section shows areas of densely packed lymphoid cells and adjacent less densely cellular regions. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer for 20 minutes, followed by cooling before antibody incubation.



STUB1 Antibody WB Analysis of Rat Heart and Brain, Mouse Heart and Human MCF7 Cells. Western blot analysis of rat heart (lane 1), rat brain (lane 2), mouse heart (lane 3), and human MCF7 cell lysate (lane 4) using CHIP Polyclonal Antibody at 0.5 ug/ml. A prominent immunoreactive band near 35 kDa is detected across all four samples, corresponding to the predicted molecular weight of STUB1. An additional higher-molecular-weight band near 80 kDa is visible in the MCF7 sample.



STUB1 Antibody FACS Analysis of Human A549 Cells. Flow cytometry analysis of human A549 cells using CHIP Polyclonal Antibody at 1 ug per million cells following blocking with goat serum. The blue histogram represents antibody-stained cells, the green histogram represents the isotype control, and the red histogram represents unstained cells. A pronounced rightward fluorescence shift is observed in the antibody-stained population relative to both controls, demonstrating increased antibody-associated fluorescence.



STUB1 Antibody IF Staining of Human MCF7 Cells. Immunofluorescence analysis of FFPE human MCF7 cells using CHIP Polyclonal Antibody. Red fluorescence is observed throughout the cytoplasmic region, with additional signal overlapping portions of the nuclear area. Nuclei are counterstained blue with DAPI. Heat-induced epitope retrieval was performed by steaming in pH 6 citrate buffer for 20 minutes.

Description

STUB1 Antibody / CHIP Polyclonal Antibody targets STIP1 homology and U-box containing protein 1 (STUB1), commonly known as CHIP, a multifunctional E3 ubiquitin ligase and cochaperone involved in cellular protein quality control. STUB1 helps determine whether proteins associated with molecular chaperones undergo additional folding attempts or are directed toward degradation. Through this dual regulatory function, it contributes to proteostasis, the maintenance of a functional and appropriately balanced cellular protein population.

STUB1 contains an N-terminal tetratricopeptide repeat (TPR) domain that mediates interactions with molecular chaperones, particularly HSP70 and HSP90. Its C-terminal U-box domain supports E3 ubiquitin ligase activity by facilitating interactions with ubiquitin-conjugating enzymes. These structural features allow STUB1 to connect chaperone-associated substrate recognition with protein ubiquitination. Depending on the substrate and cellular conditions, STUB1 can promote ubiquitin-dependent proteasomal degradation or influence protein stability through other regulatory mechanisms.

The ubiquitin-proteasome system is essential for eliminating damaged, misfolded, and short-lived regulatory proteins. STUB1 contributes to this process by recognizing selected chaperone-bound substrates and promoting their ubiquitination. Its reported targets include proteins involved in transcriptional regulation, cell signaling, and responses to cellular stress. STUB1 also participates in broader protein quality-control networks involving autophagy and the cellular response to accumulated misfolded proteins.

STUB1 has important functions in neuronal maintenance, where effective protein quality control is particularly critical because many neurons are long-lived and have limited regenerative capacity. Pathogenic variants in STUB1 are associated with neurological disorders, including spinocerebellar ataxia. Depending on the genetic context, STUB1-related disease can involve recessive or dominant inheritance and may include cerebellar dysfunction and other neurological manifestations. These associations emphasize the importance of coordinated chaperone activity and ubiquitin-mediated protein regulation.

STUB1 Antibody supports investigations into the relationship between molecular chaperones, ubiquitination, and cellular stress responses. Understanding STUB1 function provides insight into how cells regulate protein folding and degradation, maintain proteome integrity, and respond to disturbances in protein homeostasis.

Explore additional antibodies targeting molecular chaperones, ubiquitin ligases, and proteins involved in cellular protein quality control in our Cell Biology Antibodies collection.

Application Notes

Optimal dilution of the STUB1 Antibody / CHIP Polyclonal Antibody should be determined by the researcher.

Immunogen

A recombinant human protein corresponding to amino acids R51-Y303 was used as the immunogen for the STUB1 antibody.

Storage

After reconstitution, the STUB1 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

CHIP antibody, C-terminus of Hsc70-interacting protein antibody, C-terminus of Hsp70-interacting protein antibody, STIP1 homology and U-box containing protein 1 antibody, STIP1 homology and U-box protein 1 antibody, E3 ubiquitin-protein ligase CHIP antibody, Carboxyl terminus of Hsc70-interacting protein antibody, STUB1 E3 ubiquitin ligase antibody, HSP70-interacting ubiquitin ligase antibody, CHIP cochaperone antibody

Copyright © NSJ Bioreagents. All rights reserved.