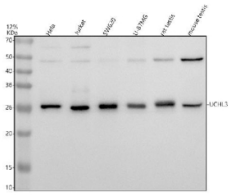
Ubiquitin C-terminal hydrolase L3 Antibody / UCHL3 (FY13451)

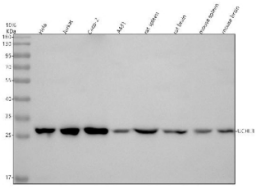
Catalog No.	Formulation	Size
FY13451	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

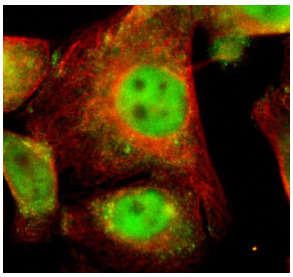
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
UniProt	P15374
Localization	Nucleus, Cytoplasm, Golgi
Applications	Western Blot : 0.25-0.5ug/ml Immunofluorescence : 5ug/ml Immunoprecipitation : 2ug per 500ug of lysate ELISA : 0.1-0.5ug/ml
Limitations	This Ubiquitin C-terminal hydrolase L3 antibody is available for research use only.



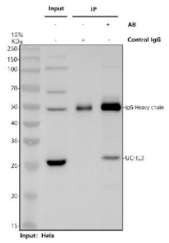
Western blot analysis of UCHL3 using UCHL3 antibody. Protein lysates from human HeLa cells (Lane 1), human Jurkat cells (Lane 2), human SW620 cells (Lane 3), human U-87MG cells (Lane 4), rat testis tissue (Lane 5), and mouse testis tissue (Lane 6) were resolved by SDS-PAGE under reducing conditions and transferred to a nitrocellulose membrane. UCHL3 was detected as a major band at approximately 26 kDa, consistent with the predicted molecular weight of Ubiquitin C-terminal hydrolase L3. A faint higher molecular weight band near 48 kDa may reflect ubiquitin-modified or ubiquitin-associated forms of UCHL3. Detection was performed using an HRP-based secondary antibody and chemiluminescent substrate.



Western blot analysis of UCHL3 using UCHL3 antibody. Protein lysates from human HeLa cells (Lane 1), human Jurkat cells (Lane 2), human Caco-2 cells (Lane 3), human A431 cells (Lane 4), rat spleen tissue (Lane 5), rat brain tissue (Lane 6), mouse spleen tissue (Lane 7), and mouse brain tissue (Lane 8) were resolved by SDS-PAGE under reducing conditions and transferred to a nitrocellulose membrane. UCHL3 was detected as a band at approximately 26 kDa, consistent with the predicted molecular weight of Ubiquitin C-terminal hydrolase L3. Detection was performed using an HRP-based secondary antibody and chemiluminescent substrate.



Immunofluorescence analysis of UCHL3 using UCHL3 antibody and Alpha Tubulin antibody. UCHL3 expression was examined in cultured HeLa cells. Enzymatic antigen retrieval was performed prior to staining. Cells were blocked with normal goat serum and incubated with UCHL3 antibody (green) and Alpha Tubulin antibody (red) overnight at 4C. Immunoreactivity was visualized by fluorescence microscopy, showing UCHL3 localization in both the cytoplasm and nucleus, while Alpha Tubulin highlights the cytoskeletal network.



Immunoprecipitation and western blot analysis of UCHL3 using UCHL3 antibody. UCHL3 was immunoprecipitated from HeLa whole cell lysates using UCHL3 antibody and analyzed by SDS-PAGE followed by immunoblotting. Lane 1 shows HeLa whole cell lysate input, Lane 2 shows immunoprecipitation performed using rabbit control IgG, and Lane 3 shows immunoprecipitation performed using UCHL3 antibody. UCHL3 was detected as a band at approximately 26 kDa, consistent with the predicted molecular weight of Ubiquitin C-terminal hydrolase L3. The band observed near 50 kDa corresponds to the IgG heavy chain. Detection was performed using an HRP-based secondary antibody and chemiluminescent substrate.

Description

Ubiquitin C-terminal hydrolase L3 antibody targets Ubiquitin C-terminal hydrolase L3, encoded by the UCHL3 gene. Ubiquitin C-terminal hydrolase L3 is an intracellular deubiquitinating enzyme that catalyzes the cleavage of ubiquitin from the C-terminus of ubiquitin-conjugated substrates. As a member of the ubiquitin C-terminal hydrolase family, it plays a fundamental role in regulating ubiquitin-dependent protein modification and turnover.

Unlike substrate-specific ubiquitin ligases, Ubiquitin C-terminal hydrolase L3 functions as a broad regulator of ubiquitin recycling. By regenerating free ubiquitin from conjugated or precursor forms, it sustains the availability of ubiquitin required for continuous proteasomal degradation and signaling regulation. A Ubiquitin C-terminal hydrolase L3 antibody supports studies examining deubiquitination dynamics and maintenance of ubiquitin homeostasis within the cell.

Ubiquitin C-terminal hydrolase L3 is primarily localized to the cytoplasm, where it interfaces with ubiquitinated proteins involved in signaling cascades, metabolic control, and stress response pathways. Its widespread expression across cell types reflects a housekeeping role that supports core cellular functions rather than tissue-restricted specialization. Modulation of UCHL3 activity can therefore influence multiple pathways simultaneously through indirect effects on ubiquitin availability.

From a biological and disease-related perspective, altered regulation of Ubiquitin C-terminal hydrolase L3 has been investigated in cancer and models of cellular stress, where imbalance between ubiquitination and deubiquitination contributes to abnormal protein stabilization or degradation. Changes in UCHL3 expression or activity may impact cell cycle progression, survival signaling, and proteotoxic stress tolerance, making it a relevant target in studies of ubiquitin system dysregulation.

At the molecular level, Ubiquitin C-terminal hydrolase L3 contains a conserved thiol protease catalytic domain

characteristic of UCH family enzymes. Its apparent activity in biochemical assays can vary depending on substrate context and cellular conditions rather than changes in protein size or sequence. Ubiquitin C-terminal hydrolase L3 antibody reagents enable investigation of deubiquitination pathways and ubiquitin system regulation, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the Ubiquitin C-terminal hydrolase L3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human UCHL3 recombinant protein (amino acids M1-N223) was used as the immunogen for the Ubiquitin C-terminal hydrolase L3 antibody.

Storage

After reconstitution, the Ubiquitin C-terminal hydrolase L3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.