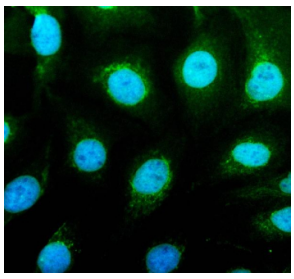
UBE4B Antibody / Ubiquitin conjugation factor E4 B (FY12046)

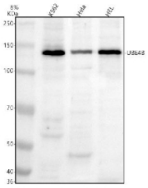
Catalog No.	Formulation	Size
FY12046	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

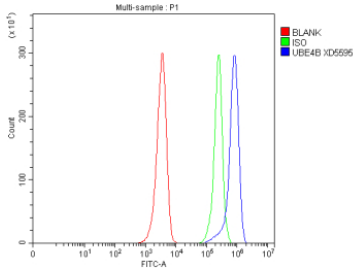
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O95155
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This UBE4B antibody is available for research use only.



IF analysis of UBE4B using anti-UBE4B antibody (green). UBE4B was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-UBE4B antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of UBE4B using anti-UBE4B antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human K562 whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human HEL whole cell 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-UBE4B 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. A specific band was detected for UBE4B at approximately 146 kDa. The expected band size for UBE4B is at 146 kDa.



Flow Cytometry analysis of HEL cells using anti-UBE4B antibody. Overlay histogram showing HEL 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-UBE4B 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

UBE4B antibody detects Ubiquitin conjugation factor E4 B, encoded by the UBE4B gene. Ubiquitin conjugation factor E4 B is an E3/E4 hybrid ubiquitin ligase that regulates polyubiquitination of target proteins, contributing to protein turnover, quality control, and signaling regulation. UBE4B antibody provides researchers with a powerful reagent for studying ubiquitin-mediated degradation, proteostasis, and cellular signaling pathways.

Ubiquitin conjugation factor E4 B belongs to the U-box containing E3 ligase family and shares functional similarity with its yeast ortholog Ufd2. Research using UBE4B antibody has shown that it elongates ubiquitin chains initiated by E1 and E2 enzymes, ensuring effective targeting of substrates for proteasomal degradation. This E4 activity distinguishes UBE4B from classical E3 ligases and highlights its specialized function in ubiquitin chain extension.

Studies with UBE4B antibody have revealed its role in regulating key proteins involved in cell cycle, apoptosis, and DNA damage responses. UBE4B interacts with tumor suppressor p53 and facilitates its ubiquitination and degradation, thus modulating p53-dependent cell cycle arrest and apoptosis. Dysregulation of this process impacts oncogenesis, where UBE4B may act as both a regulator of survival and a potential therapeutic target.

Dysfunction of UBE4B has been associated with neurological disease and cancer. Research using UBE4B antibody has shown that abnormal activity contributes to neurodegeneration by disrupting protein quality control, while overexpression in cancer supports uncontrolled proliferation. These dual roles emphasize the importance of balanced ubiquitin regulation for normal physiology.

UBE4B antibody is commonly used in western blotting, immunoprecipitation, and immunohistochemistry. Western blotting quantifies UBE4B levels in tissues and cell lines, immunoprecipitation identifies ubiquitination targets, and immunohistochemistry demonstrates expression in tumors and brain regions. These applications make UBE4B antibody indispensable for proteostasis and disease research.

By providing validated UBE4B antibody reagents, NSJ Bioreagents supports studies into ubiquitination, protein degradation, and disease mechanisms. Detection of Ubiquitin conjugation factor E4 B provides researchers with insight into how ubiquitin ligases regulate cellular survival and stability.

Application Notes

Optimal dilution of the UBE4B antibody should be determined by the researcher.

Immunogen

E.coli-derived human UBE4B recombinant protein (Position: S184-H1302) was used as the immunogen for the UBE4B antibody.

Storage

After reconstitution, the UBE4B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.