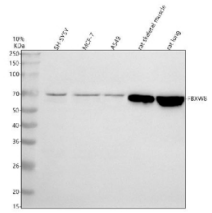
FBXW8 Antibody / F-box/WD repeat-containing protein 8 (FY12997)

Catalog No.	Formulation	Size
FY12997	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, 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, 0.2 mg Na2HPO4.
UniProt	Q8N3Y1
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This FBXW8 antibody is available for research use only.



Western blot analysis of FBXW8 using anti-FBXW8 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human whole cell lysates, Lane 4: rat small intestine tissue lysates, Lane 5: rat lung 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-FBXW8 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 FBXW8 at approximately 67 kDa. The expected molecular weight of FBXW8 is ~67 kDa.

Description

FBXW8 antibody detects F-box/WD repeat-containing protein 8, a substrate-recognition component of the SCF (SKP1-CUL1-F-box) E3 ubiquitin ligase complex. The UniProt recommended name is F-box/WD repeat-containing protein

8 (FBXW8). This protein mediates selective ubiquitination and degradation of regulatory proteins that control cell cycle progression, growth, and signal transduction.

Functionally, FBXW8 antibody identifies a 616-amino-acid protein that contains an N-terminal F-box motif and multiple C-terminal WD repeats. The F-box domain binds to the SKP1 adaptor protein, anchoring FBXW8 within the SCF complex, while the WD repeats mediate substrate recognition. FBXW8 acts as a specificity factor that determines which proteins are targeted for ubiquitin-dependent degradation. Key substrates include IRS1, TSC2, and cyclin D1, linking FBXW8 to insulin signaling and cell cycle regulation.

The FBXW8 gene is located on chromosome 12q24.31 and encodes a cytoplasmic and nuclear protein expressed in most tissues, particularly in skeletal muscle and liver. FBXW8 associates with the cullin family protein CUL7 to form the CUL7-FBXW8 E3 ligase complex, distinct from classical SCF ligases. This complex regulates growth factor signaling and metabolic homeostasis by mediating the ubiquitination of signaling intermediates involved in mTOR and PI3K pathways.

In physiology, FBXW8 controls insulin receptor signaling by targeting IRS1 for degradation, preventing excessive insulin pathway activation. It also influences neuronal development and differentiation through ubiquitin-mediated turnover of growth-regulating proteins. Disruption of FBXW8 function leads to aberrant signaling, impaired growth, and metabolic imbalance. In cancer, altered FBXW8 expression contributes to tumor cell proliferation and metastasis by deregulating cyclin and kinase levels.

FBXW8 antibody is widely used in cell cycle, signal transduction, and ubiquitin pathway research. It is suitable for immunoblotting, immunoprecipitation, and proteomic studies to identify protein interactions and degradation targets. This antibody provides a valuable tool for investigating the role of F-box proteins in proteostasis and oncogenic signaling. In metabolic studies, FBXW8 detection helps assess the regulation of insulin signaling components.

Structurally, FBXW8's WD-repeat domain forms a beta-propeller structure that enables substrate recognition, while its F-box motif mediates SCF complex assembly. FBXW8 activity is modulated by phosphorylation, ubiquitination, and association with CUL7. NSJ Bioreagents provides FBXW8 antibody reagents validated for use in E3 ligase biology, proteasomal degradation, and metabolic signaling research.

Application Notes

Optimal dilution of the FBXW8 antibody should be determined by the researcher.

Immunogen

E.coli-derived human FBXW8 recombinant protein (Position: M1-V598) was used as the immunogen for the FBXW8 antibody.

Storage

After reconstitution, the FBXW8 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.