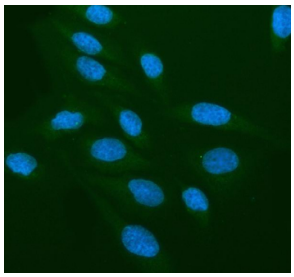
CRBN Antibody / Cereblon (FY12446)

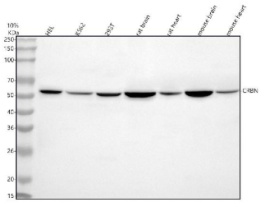
Catalog No.	Formulation	Size
FY12446	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

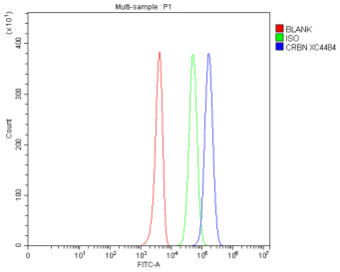
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q96SW2
Applications	Western Blot: 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This CRBN antibody is available for research use only.



Immunofluorescent staining of CRBN using anti-CRBN antibody (green). CRBN was detected in an immunocytochemical section of U2OS 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-CRBN 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 nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of CRBN using anti-CRBN antibody. Lane 1: human HEL whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat heart tissue lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse heart 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-CRBN 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. The expected molecular weight of CRBN is ~51 kDa.



Flow Cytometry analysis of 293T cells using anti-CRBN antibody. Overlay histogram showing 293T 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-CRBN 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

CRBN antibody recognizes Cereblon, a substrate receptor component of the CRL4 E3 ubiquitin ligase complex that plays a central role in targeted protein degradation. Cereblon binds to the DDB1-CUL4-ROC1 complex, recruiting specific substrates for ubiquitination and subsequent proteasomal degradation. This process regulates numerous cellular pathways, including cell cycle progression, metabolism, and neuronal function. The CRBN antibody is widely used to study protein homeostasis, drug-target interactions, and the mechanism of action of immunomodulatory drugs such as thalidomide, lenalidomide, and pomalidomide, which bind Cereblon to alter substrate specificity.

Cereblon is encoded by the CRBN gene located on human chromosome 3p26.2. The protein consists of 442 amino acids and contains a conserved Lon domain-like region essential for ligand binding and substrate recognition. Within the CRL4 complex, Cereblon acts as a molecular adapter, recruiting neo-substrates such as Ikaros (IKZF1), Aiolos (IKZF3), and CK1alpha in response to drug binding. This interaction forms the basis for therapeutic degradation of disease-associated transcription factors in multiple myeloma and other cancers. Loss-of-function mutations in CRBN have been linked to autosomal recessive intellectual disability, highlighting its importance in neuronal signaling and synaptic plasticity.

The CRBN antibody enables detailed examination of the protein's expression and regulation across tissues. Western blot analysis typically reveals bands near 51 kDa corresponding to full-length Cereblon, while smaller isoforms may be detected in certain tissues. Immunofluorescence shows localization to both the cytoplasm and nucleus, depending on cell type and activation state. Researchers use this antibody to assess CRBN abundance in studies of proteolysis-targeting chimeras (PROTACs), a rapidly growing class of therapeutic agents that harness Cereblon for selective degradation of target proteins.

Beyond oncology, CRBN influences neuronal excitability, metabolic regulation, and circadian rhythm. It has been shown to modulate BK channel activity and AMP-activated protein kinase signaling, linking it to ion channel control and energy metabolism. NSJ Bioreagents offers a validated CRBN antibody optimized for western blot, immunofluorescence, and immunoprecipitation, providing a high-quality tool for research into E3 ligase biology and drug-induced protein degradation mechanisms.

Application Notes

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

Immunogen

E.coli-derived human CRBN recombinant protein (Position: M1-H378) was used as the immunogen for the CRBN antibody.

Storage

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

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